

Local Palm users advised against memory upgrade

By Sumner Lemon

The offer might sound tempting. For HK\$550, you can get a local shop to upgrade the memory of your 3Com Palm V personal digital assistant from 2M to 8M. All it takes is knowing the right people or being familiar with Internet newsgroups. There's just one small hitch — the upgrade does not have 3Com's official approval and voids the product's warranty.

"If they change the original configuration [of the Palm V], they don't get the warranty," said Cara Liao, Asia-Pacific marketing manager of 3Com's Palm Computing division. "It's not our responsibility."

A representative from local 3Com distributor Synergy warned that trying to upgrade the Palm V could damage the device.

"If you aren't using the right kind of equipment [to do the upgrade] you'll probably damage your Palm V. Even if you take it back to 3Com, if you've done anything on the motherboard, I don't think they will do anything on this. It would void the warranty," said Francis Fong, senior vice president of sales and marketing at Synergy.

The problem, according to officials, is that there is no way to guarantee the quality of service offered by the companies that do the upgrade. There is no official relationship between them and 3Com, said Liao.

"We don't advise people to change the configuration because it is not under our control," she said.

But while company executives advise against the 8M upgrade, 3Com has yet to receive any complaints

from users who have had their Palm V damaged by the upgrade, said Liao.

And at least one local user who got the 8M upgrade is happy, declaring himself "absolutely satisfied with the craftsmanship and the price."

Details of the Palm V upgrade are readily available on the Web and in Internet newsgroups such as comp.sys.palmtops.pilot, where users have posted details about the upgrade's availability in Hong Kong.



Upgrading the Palm V memory to 8M will void the original warranty.

According to one recent newsgroup post, the upgrade involves switching the Palm V's standard Samsung 2M chip with an 8M chip from NEC. In operation mode, the NEC and Samsung chips consume the same amount of power but the NEC chip uses approximately 50 percent less power in standby mode, it claimed.

At the time this article went to press, an e-mail sent to a member of the Hong Kong Palm User Group who does the 8M upgrade had gone without a response.

Customs readies criminal action against corporations

By Megan Scott

The SAR's Customs and Excise Department (CED) has stepped up its efforts in the war against software piracy by announcing plans to target corporations using illegal software for criminal action. With the help of the Business Software Alliance (BSA), CED is hoping to close its first corporate case any day now, according to John C. Tsang, commissioner at CED.

In the past, CED has worked with the BSA to bring criminal lawsuits against retailers and manufacturers of pirated software but not against corporations using illegal software. Launching criminal suits against corporations and end users is more difficult because the burden of proof is a lot more stringent, Tsang explained. The BSA and CED have been working for a few months now on finding a "solid case," Tsang said.

"We want to get a case that is solid so that to set the proper benchmark for the others to follow," Tsang said. "I don't want the first case to go bust."

Earlier this month, CED raided a computer dealer in its first criminal hard disk loading case. The Shamshui computer dealer was allegedly loading unauthorized software onto computers prior to sale at the Golden Computer Center.

Meanwhile, Tsang — who took over the post of commissioner three months ago — expects to nab the first corporate pirate any day now with the help of the BSA. "We were hoping to do it yesterday," Tsang said in a phone interview last Friday.

The BSA has been active in Hong Kong for several years bringing civil lawsuits against organizations using



Tsang: "I don't want the first case to go bust."

illegal software. For example, Hong Kong-based electronics manufacturer Team Concepts paid a HK\$1.5 million settlement last year to BSA members acting on a tip received over the BSA's hotline. The BSA offers a HK\$15,000 reward for information provided over its hotline that leads to a successful settlement.

Under the plans to target corporations for criminal action, the BSA will feed information to the CED who will then raid the corporations; seize the material in question; get expert witnesses to confirm that the software is pirated; and then prosecute, Tsang explained.

The criminal penalty for using pirated software brings fines of up to HK\$50,000 and as much as four years in prison, Tsang said.

But not everybody thinks the plan to target companies is a good idea.

One corporate end user expressed concerns over the move to prosecute criminal cases against corporations. Agnes Mak, head of IT for the Asia-Pacific North operations of British-

American Tobacco (BAT), questioned whether CED intended to prosecute CEOs, IT managers, or individual PC users for using illegal software.

BAT has a strict internal policy to ensure there is no illegal software, Mak said, adding she had concerns for companies that are more lax.

In addition to working together to bring criminal lawsuits against corporations, *continued on page 4*

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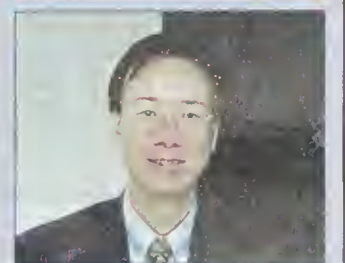
The Securities and Futures Commission and the China Securities Regulatory Commission have announced plans to cooperate on the development of regulations for Mainland high technology companies interested in listing on Hong Kong's planned second market. Details on page 2

An informal survey conducted at a recent PricewaterhouseCoopers seminar has found that local entertainment and media firms aren't prepared for digital content delivery. More on page 8.

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CIO HONG KONG



This month's CIO features a look at how local trading firm Da Chong Hong is revamping its corporate network in preparation for the roll out of its Oracle-based Motor System application later this year. Our four-page supplement starts on page 9.

MARKET PLACE Pages 16-18



Hong Kong not too late to 'Net party, says Cerf

By Clare Haney

IDG News Service, Hong Kong

It's not too late for Hong Kong to establish a significant presence in Internet-based business, according to one of the founders of the Internet, given the speed of technology change.

"The 'Net changes at such a rapid pace that everyone faces the same challenge each day — how to keep up," said Vint Cerf, senior vice president for Internet architecture and technology at MCI WorldCom. "Hong Kong isn't late at all, it just has to get going."

Cerf was in Hong Kong last week on a brief trip to Asia that will also see him visiting Tokyo. Along with

Robert Kahn, Cerf is best known for co-designing TCP/IP, a task which has bestowed on both men the title of "father of the Internet."

Following a speech to the American Chamber of Commerce in Hong Kong, Cerf said that he welcomed Hong Kong's Cyberport initiative, although he added that he wasn't that familiar with the details of the plan. The

Cyberport is a project valued at HK\$13 billion (US\$1.7 billion) aimed at encouraging both foreign and local IT and multimedia vendors to set up shop on a 26-hectare site on Hong



Cerf: "Hong Kong isn't late at all, it just has to get going."

Kong island.

"Anything that increases utilizing the 'Net and encourages investment is helpful," Cerf said, adding that 'Net-enabled businesses create an upward spiral of positive feedback, so that every new product or standard creates new ideas that can, in turn, build upon that.

He suggested that the central role Hong Kong's government could adopt in moving the SAR to a more 'Net-centered economy is to encourage businesses to focus on building applications that draw on Hong Kong's history

as acting as the Asian hub for international trade.

"This is the most industrious place I've been in," said Cerf speaking about Hong Kong. "It's free enterprise at its best and, historically, entrepreneurship is part of the culture. The only thing lacking is to translate that into online presence, that's what you need to work on next."

He described Hong Kong as a relatively open market, although one where the telecom sector still has some restrictions that could prove to be potentially inhibiting. The government recently announced a freeze on the granting of further fixed line licenses as a way of promoting more competition between the current four license holders.

SAR, Mainland concur on second market

By Megan Scott

Hong Kong's Securities and Futures Commission (SFC) and the China Securities Regulatory Commission (CSRC) will start working together on the regulatory principals for Mainland companies interested in listing on Hong Kong's future second market, said Andrew Sheng, chairman of the SFC at a high technology forum in Beijing last

week. In part, the concept of a second market is aimed at providing a listing mechanism for high technology companies.

The idea for a second market arose out of concern by government and industry groups over the lack of capital for small- and medium-sized companies, especially high technology companies, to finance their business development, Sheng explained.

Work on the model of Hong Kong's Growth Enterprise Market (GEM) began last May and the market is expected to be open later this year. Details on how companies can get listed are expected to be announced next month, according to a spokesman at the SFC.

Over the past year, market studies conducted by the Stock Exchange of Hong Kong (SEHK) have revealed that

quite a number of Mainland enterprises are interested in listing on the GEM, according to Sheng. "To tackle market integrity issues arising from Mainland enterprises listing on GEM, there will be close regulatory cooperation between the SFC and the CSRC," Sheng said. In addition, the CSRC, SFC, SEHK and "relevant experts" will set up a joint working party, he said.

One local Internet service

provider planning to go public thought the collaboration was a good idea. "I think its going to be good for protecting investors' interest," said Charles Mok, general manager at HKNet – a subsidiary of CCT Telecom which recently announced its plans to list either later this year or early next year. The company is considering Nasdaq, SEHK, and GEM although nothing is finalized yet, according to Mok.

A second market is still integral for Hong Kong's IT develop-

ment and growth even though you already see companies not waiting and going overseas for listing, Mok said. "If Hong Kong doesn't have a local mechanism to seek further funding for development...it's only going to mean that the opportunity is going to be taken elsewhere," Mok said.

The "wait and see" attitude is being taken by local e-commerce software developer ecVision which doesn't plan to go public for at least another two years. Good valuations and analysts are important when making decisions on where to list, said Thomas Ng, managing director of ecVision. Analysts have



Sheng: "To tackle market integrity issues arising from Mainland enterprises listing on GEM, there will be close regulatory cooperation between the SFC and the CSRC."

a lot of influence and there really are no software analysts in Hong Kong because there are few software companies, he said.

In addition to market integrity, GEM will follow the basic regulatory principals of SEHK with the view to becoming a more disclosure-based exchange, SFC's Sheng said. Currently, SEHK operates on a more "hybrid" disclosure, merit-based system, he said. With the potentially riskier nature of the business carried on by GEM listed companies, "the quality of the disclosure and market integrity are all the more important," Sheng said.

SGI offers key piece of OS to Linux users

By Dorte Toft

IDG News Service, Boston

Linux received yet another important boost last week, when Silicon Graphics Inc. (SGI) offered a key piece of its IRIX operating system to the open-source community. The software piece, SGI's journal file system known as XFS, will, if implemented, enhance a Linux-based system's ability to recover fast after a crash and to handle very large files.

According to analysts, the software is crucial for Linux in order to enter the corporate world, where reliability and 24-hour service are required. The offer from SGI fills the gap, according to an operating system analyst.

"Furthermore, the XFS is a highly-valued piece of software by the present users," said Dan Kusnetzky, analyst at International Data Corp. (IDC), a market research firm based in Framingham, Massachusetts.

Now it is up to each Linux

vendor whether XFS will be incorporated in the operating system. The decision depends heavily on an informal evaluation, done by various people in the Linux community, after the source code has been posted.

"And that is a very aggressive peer review", said Kusnetzky.

However, he considers the SGI commitment to Linux one of the most important in a long line of support from IT vendors in recent months. Kusnetzky also admires SGI for having the courage to post the source code of XFS and for doing it so soon. Other vendors will now have a chance to make their hardware take better advantage of the XFS, he noted.

SGI does have a good chance of getting more customers on its Intel-based workstations owing to the many common traits between users of SGI products and Linux, the analyst said.

"They are both into content. Not business," said Kusnetzky.

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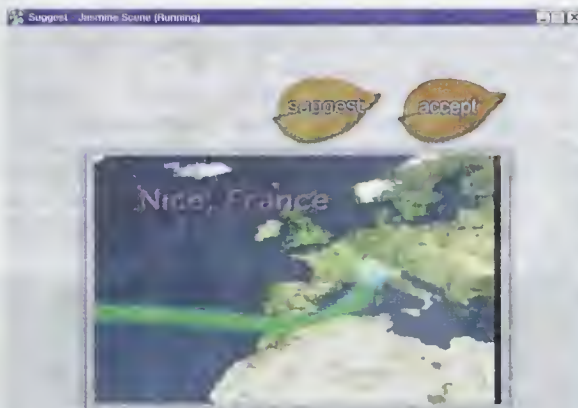
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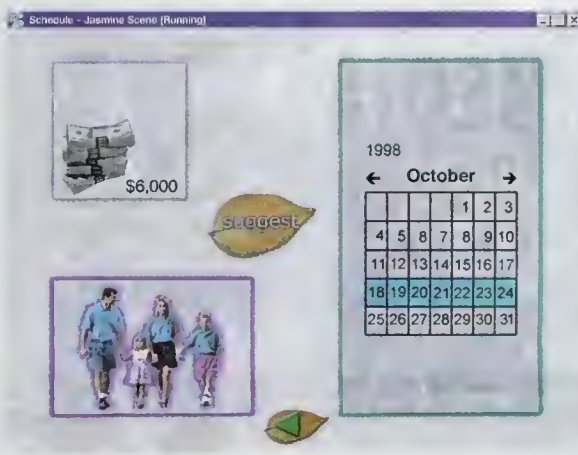
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HP maps out plan for Internet commerce

By Dan Briody
US InfoWorld

Hewlett-Packard put some muscle behind its electronic-services message this week by announcing a technology the company hopes will change the way business is done on the Internet.

The company revealed its E-speak technology for Internet commerce, formerly code-named Fremont, and jumped headlong into the application

service provider (ASP) market. With the announcements, HP is hoping to unify its entire organization as well as lead what it calls "Internet: Chapter 2."

"E-services is spreading like wildfire throughout HP and is unifying our company," said HP CEO Lew Platt, addressing stockholder concerns that the company has become too decentralized. "We have not done a good job with Internet 1, but Internet 2 promises to be more profitable."

HP said that, because E-speak is Java-based middleware, it will provide dynamic discovery and brokering of e-business. Using a uniform service interface and software run time that performs the services, E-speak could become the building block for a more integrated way of doing business on the Web. But the onus is on HP to drum up worldwide support and adoption of the technology if it is to succeed.

"The keys will be marketing

and acceptance," said Nigel Ball, general manager of HP's e-services division.

Despite the bold claims and plans HP has for E-speak, there is much work to be done in proliferating the nascent technology, designed to enable transactions among disparate businesses on the Web, according to one analyst.

"These are still the early days; there are no products, not even an SDK [software developer's kit]," said Paul McGuckin, an

analyst at the Gartner Group, in Stamford, Connecticut. "There is a technology, and it does appear to be a good set of services, but they still have a number of barriers. They need a lot more partnerships. They have very few people signed up right now."

Partners include PeopleSoft, Nokia, and Seagate. Noticeably absent from the proceedings at HP's headquarters was Microsoft.

"HP would love to have Microsoft anoint this, but they won't," McGuckin said. "This is way too big a space to let HP own it."

HP is actively recruiting supporters and is in talks with Microsoft. The company is also hunting for an impartial group to take control of the

free, open-source E-speak software, a la Linux.

"We don't want to control it; we don't want to fall into the Java trap," Ball said, referring to Sun's travails.

Although HP's ASP announcements lacked specific details, what it is clear that the company intends to host applications, storage, data mining, and warehousing, and any number of IT services as "apps on tap." HP officials said they believe that the application outsourcing market will grow to US\$10 billion in the next three years. Microsoft will support HP's outsourcing business with Exchange and BackOffice applications, according to Ann Livermore, CEO of Enterprise Computing Business at HP.



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from page one

porations, the CED and BSA also jointly announced initiatives to educate corporations on software asset management.

Declining piracy?

CED's Tsang couldn't specifically quantify the impact that raids and criminal lawsuits against corporations would have on reducing piracy but said it would be "substantial."

"I think what it will do is to create a huge deterrence if people understand that we're taking this very seriously and they could get some pretty heavy penalty for doing that," Tsang said.

The 1997 piracy rate in Hong Kong was 67 percent compared to 64 percent, 32 percent, and 28 percent, respectively, for Taiwan, Japan, and the U.S., according to the BSA.

According to Tsang, the scale and quantity of piracy in Hong Kong has decreased over the past few years. The CED used to find 10,000 to 20,000 pirated discs during a raid but more recently shops have had only a few dozen copies of illegal software, Tsang said. Instead of whole shopping malls, CED is now rooting out scattered individual shops and hawkers, he said.

Tsang discounted concerns that the BSA — which represents a small group of software companies including Microsoft, Adobe, Autodesk and Symantec, among others — might benefit more from CED's anti-piracy raids than non-member software companies. "BSA does not have a monopoly of Customs use," Tsang said. CED works with other organizations and alliances such as the Motion Picture Association, he added.

For the BSA, the more proactive partnership with CED is important because enterprise piracy represents over half of all piracy losses to the software industry annually, according to Tom Robertson, legal counsel for Microsoft Hong Kong and vice president

of the BSA.

"This initiative is very important to the Hong Kong software industry and represents a major commitment on the part of the government to address the serious problem of software piracy here," Robertson said.

Currently, the BSA is working with other regional authorities on similar criminal enforcement programs in Korea, Taiwan, and Malaysia, Robertson said.

Enterprise piracy is by far the biggest challenge for the software industry, Robertson said, adding that this partnership program should have a "dramatic effect" on the software piracy rate in Hong Kong.

Robertson could not say exactly how much the partnership between the BSA and CED will reduce the piracy rate in Hong Kong but said he expects the BSA will continue to receive a "large number of calls" from people reporting illegal software use at the corporate level. "Hong Kong will have to do a lot of work before the piracy rate drops, but this program is a very strong step in the right direction," Robertson said.

Piracy and the CED have made headlines lately. Pirated software was uncovered at the offices of the SAR's Housing Department, according to recent reports. In related news, the head of the CED's Prosecution Bureau was jailed for four years for tipping off a pirated VCD manufacturer, according to recent press reports.

Earlier this month, the CED stopped a submarine-type vessel loaded with pirated software from Macau, CED's Tsang said. "Ideally, we'd stop everything at the border," but the smugglers are clever, Tsang said. Over this past few weeks, Tsang said he has met with his customs counterparts in Beijing and Guangzhou to start "sharing intelligence and hit [pirates] in transport."

Sun offers Y2K compliance warranty

By Jack McCarthy

IDG News Service,
San Francisco

Sun Microsystems has announced it will honor a broad warranty that will cover problems caused by the Year 2000 bug on a majority of its products, a move designed to reassure its customers that there should be few difficulties in the transition to the next millennium.

Sun has issued a guarantee that products with a Year 2000 warranty should continue to work, and if not, the company

will repair the products, supply equivalent products, or refund their net book value. The warranty applies to products purchased on or after January 1, 1995.

The Year 2000 warranty was issued earlier this year, but the company publicly announced it this week to reassure customers.

"This warranty helps the end user know that Sun isn't going to flip-flop on products listed as Year 2000 compliant," said Tony Hampel, Sun's group manager for Year 2000 marketing.

The Year 2000 problem is occurring because most older

software was written with a two-digit date field that might read the "00" in 2000 as "1900" and therefore fail to make correct calculations. The vast majority of Sun's products purchased after January 1, 1995, will have to be Year 2000-compliant, Hampel said.

Sun's stance is one of the most proactive efforts by computer companies to show customers the company stands behind its products when it comes to the so-called Y2K

issue, said Tom Oleson, research director of the IT advisor program at market research firm International Data Corp.

Other companies have also announced they will honor Y2K warranties, including IBM, Microsoft, Dell Computer, and Novell, Oleson said. "What you have is the IT industry saying they are going to stand behind their products."

"But the Sun announcement makes sure their customers understand they really do in-

tend to support them," Oleson said. "This is kind of a blanket statement of support."

Another analyst agreed that Sun's action was very aggressive.

"I don't think anybody [except Sun] has given a guarantee that they will come in and fix any problems," said George Weiss, an analyst with the Gartner Group of Stamford, Connecticut.

Sun began testing its products for Y2K compliance in

1996 and has updated the status of products that were on its price lists starting January 1, 1995, the company said in a statement. All of the company's 14,000 products will be tested for compliance.

The company's high-volume products were tested first. Sun's Solaris operating system, and its UltraSPARC, Java, and VIS Technology products were tested and are listed as Y2K compliant, according to the company.

IBM's DB/2 goes lightweight in beta

By Dorte Toft

IDG News Service, Boston

IBM has announced that DB2 for palm-sized computers is in beta test and that it and an 8M version for notebooks will be available later in the year.

Other DB2 releases are coming sooner. On May 21 the AS/400 community got its new version, 4.4. The DB2 version 5 for mainframes running OS/390 will be released June 25. Then on July 30 IBM will launch DB2 Universal Database version 6.1 for Windows NT and Unix, as well as for OS/2 and Linux.

In its announcement IBM stressed the huge interest for the beta version of DB2 for Linux, an open source operating system.

"There have been over 34,000 downloads of the beta version", said Janet Perna, general manager of data management at IBM Software Solutions.

The new version, 6.1, is enhanced in several areas, according to Perna. It speeds up the application development of electronic commerce systems, targets performance and ease-of-use, and includes a cross-platform procedure builder for Java and integration with VisualAge and VisualStudio.

IBM also is releasing migration tools for databases from Oracle, Sybase, Informix, and Microsoft's SQL Server and Microsoft Access.

IBM is trying to increase its market share edge with the migration tools. In 1998 DB2 was the best selling database, according to Gartner Group's market research firm, Dataquest. IBM had 32.3 percent of the market, pushing Oracle down to second place with 29.3 percent from first place in 1997. In third place was Microsoft with 10.2 percent market share, in fourth place was Informix with 4.4 percent and Sybase was fifth with 3.5 percent.

The upward trend seems likely to continue for IBM in 1999.

The first-quarter revenue of DB2 for OS/390 grew 13 percent from the same quarter the previous year and 123 percent for Windows NT, according to IBM's Perna. The installed base of DB2 servers is 1.1 million.

IBM has changed the price model for DB2 Enterprise Edition and the extended enterprise edition from payment-per-user to payment-per-processor to accommodate companies who have an increasing number of users conducting Internet commerce, Perna said.

IBM developed the light version for notebooks, DB2 Universal Database Satellite Edition, and the featherweight version, named DB2 Everywhere, because of the growing number of mobile workers, the company said.

The Satellite Edition for notebooks, which uses 8M of RAM and takes up 30M of storage on the hard disk, installs itself and replicates with the central database automatically, IBM said.

DB2 Everywhere, which uses 50K of RAM, was developed for IBM's Workpad, 3Com's Palm computers, Windows CE computers, and other devices. Synchronization with relational data, Lotus Notes or Microsoft Exchange takes place via IBM Mobile Connect.

Oracle, however, will beat IBM in releasing a database for palm-sized devices. Oracle, based in Redwood Shores, California, will ship its Oracle8i Lite in June, according to a statement from the company. Furthermore, Oracle plans to make this version available for Linux as well.

The announcements from IBM get a thumbs-up review from Mitch Kramer, an analyst at Patricia Seybold Group in Boston.

"It's all good for DB2 — new markets, new platforms, better and simpler pricing," he said. "DB2 is a formidable offering and IBM's marketing hasn't been as strong as its product."



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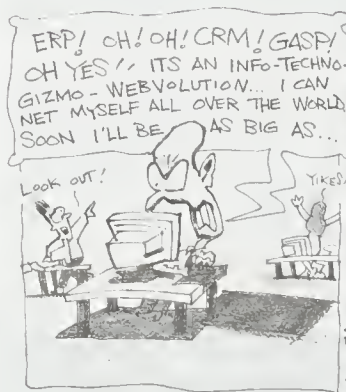
How to avoid being 'Amazoned' by your competition

Everybody, it seems, is worried about getting Amazoned. We're all sweating and fretting that the next big out-of-nowhere Internet startup will steal our company's customers while running its stock price into the stratosphere to make us look like pipsqueaks by comparison.

We can't do much about the amazing stock prices of companies like Amazon.com. Let's face it, investors love a pure Internet play — no bricks, no mortar, nothing but technology. But take a closer look at Amazon as it celebrates its fourth birthday by buying up online drug and pet stores. Amazon's secret, masterfully hidden from Wall Street wizards and industry deep thinkers, is that it's not a technology company at all. Amazon knows exactly what it is: a retailer.

Which is why if you think of yourself and your IT shop as being about technology, there's no way you can avoid being Amazoned.

Find that hard to believe? You're not alone. Amazon has bamboozled lots of folks into



thinking it's an IT company. One analyst firm even predicts that Amazon will get out of retailing and become "a database and customer information clearinghouse," because everybody knows that information is where the real money is.

Yeah, right. So how come Amazon is leasing a million square feet of warehouse space in Kansas and Nevada? Those aren't data warehouses, folks

— that space is for CDs, dog food and hooks.

Sure, Amazon uses technology. Lots of news stories a few years ago oohed and ahled over the fact that the "Earth's Biggest Bookstore" had hardly any books in stock. Amazon just took the orders and passed them on to publishers to ship. That certainly sounds like pure technology.

But Amazon's heart, soul,

guts and brain are all about one thing: Amazon sells. Its virtues are straight out of Retailing 101: huge selection, discount prices and a great sales pitch. Amazon's impressive technology is fanatically focused on one thing — being the best store anywhere. Does Amazon have a treasure trove of customer data and market intelligence? Sure, and it's all directed at selling even more

stuff. Amazon will do just about anything to keep customers coming back — even selling hooks at a loss.

That's why Amazon is building warehouses. When Amazon gets an order for one copy of a book and passes it on to the publisher, Amazon may end up paying full retail price, even though it sells the book at a discount. Warehouse space makes it possible for Amazon to buy books with quantity discounts and cut shipping costs.

In other words, Amazon stands today's conventional IT wisdom on its head. Most companies try to use IT to cut costs, and use bricks-and-mortar facilities such as stores and warehouses to sell their goods. Amazon uses IT to sell the goods, and hopes to use conventional warehouses and logistics to cut its costs.

There's no confusion there, no question about the value of IT to the business. IT is how Amazon does business. But the business isn't IT — it's selling.

So if you don't want to be steamrolled by Amazon or some other hot Web startup,

you'd better figure out what business you're in.

You'd better know without a doubt that you're in retail — or banking or transportation or manufacturing. If you think you're in the technology business just because you spend your time managing a Web site, designing databases, writing applications or keeping a network running, you've already lost the war.

And you'll get Amazoned for sure.

The author, Frank Hayes, is US Computerworld's staff columnist. His e-mail address is frank_hayes@computerworld.com.

Don Tennant is on assignment this week.

How to contact Computerworld

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Our telephone number is 2861-3238. Call during business hours.

Facsimile
Fax us anytime at 2861-0953.

Electronic mail
You can reach the Editor via e-mail at don_tennant@idg.com.hk

Post
Computerworld is located at Suite 1701, K. Wah Centre, 191 Java Road, North Point, Hong Kong.

Worried about Y2K? Look out for Week 1024

If you're the squeamish type who has vowed to keep your distance from anything computer-based this New Year's Eve, here is something else to consider: GPS Week 1024.

On August 22, 1999, the satellites constituting the Global Positioning System (GPS) will have their own Y2K scenario as Week 1023 ends and the system rolls over to Week Zero. (A GPS Cycle is 1,024 weeks.) The week number is broadcast from each GPS satellite as part of the GPS navigation message. As with Y2K, nobody is completely certain what will happen when Week Zero pops up.

The GPS was developed as a location-tracking tool for the U.S.

military. The U.S. Department of Defense deployed and maintains the dozens of GPS satellites stationed in geosynchronous orbit above Earth. Signals from these satellites are used by GPS receivers to calculate the latitude, longitude and altitude of the receiver location in real time.

In a few short years, GPS has become the favored method of tracking location for mariners, aviators and hikers. A fully functional handheld GPS receiver can be had for US\$150. Even traveling salesmen have adopted GPS devices — linking the unit into computer-based mapping systems in their cars.

What, pray tell, does this have to do with IT? Well, network

managers might not care about location, but they do need to know the time. More than that, for certain network management and troubleshooting functions, they need to know the exact time. They need clock synchronization.

Running traces to log a series of discrete events or packet transfers is what network managers must often resort to when attempting to diagnose a complex problem. For example, analyzer/trace tools might be placed at two different points on a network, say New York and Chicago, and packets entering at New York and transiting Chicago could be traced to determine if any are being dropped

or modified. If the clocks are out of sync on the two analyzers, then just finding the packets in question could be an ordeal. And, if packet latency is an issue, the synchronization of the clocks is even more critical.

Some high-end network analyzer vendors have solved the problem by developing products that leverage the GPS system to provide a clock source that would allow geographically separate units to maintain accurate — and thus synchronized — clocks. Who knows how many troubleshooting systems pull their clocks from GPS units?

Not to worry, though — GPS manufacturers are fairly sure the rollover won't cause problems.

Garmin International, a major vendor of these devices, says newer products won't have a problem. But, the vendor warns, "Some older Garmin products will need to perform an 'auto locate' or 'search the sky' operation one time, the first time they are turned on following the GPS week rollover event, in order to acquire satellites and perform navigation functions."

Remember, you heard it here first.

The author, Kevin Tolly, is president of The Tolly Group, a strategic consulting and independent testing firm in Manasquan, New Jersey. He can be reached at ktolly@tolly.com.

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EDITOR: Don Tennant
ASSISTANT EDITOR: Sumner Lemon
SENIOR REPORTER: Megan Scott
EDITORIAL COORDINATOR: Alicia Lynskey
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SALES MANAGERS: Molly Leung, Joanne Lee
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MANAGING DIRECTORS/PUBLISHERS:
Micaela de Almeida
Melvyn Bennett

DIRECTORS: Patrick McGovern (USA)
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VIEWPOINT: Let's put the 'customer' in CRM

To those of you who are building Internet-based customer relationship management (CRM) systems, I offer this one piece of advice: Don't forget the customer.

As the zeal for e-commerce grows, so does the market for CRM. These systems are highly complex, hardware-software-networking concoctions that facilitate the business/customer relationship. And the CRM market is booming. International Data Corp. believes that CRM is on the verge of tremendous growth and will be a US\$9 billion market in four years. Non-human interfaces will replace the person-to-person dynamics that have defined the business/customer relationship.

There already is one sterling example of machines attempting to replace people in the business/customer relationship. I'm talking about that paragon of modern efficiency, automated telephone systems. Don't you hate them? How many of you have simply hung up on them?

If that's the kind of model around which ambitious CRM solutions will be built, then all those stratospheric predictions of triple digit e-commerce will prove highly inaccurate. Can machines really automate significant portions of what has always been a person-to-person relationship? I have my doubts.

Consider this simple anecdote. I am a (largely satisfied) customer of McAfee Associates' antivirus software. This kind of product is like an annuity for the vendor. You buy it fairly cheaply then pay annual fees for upgrades that fight new viral strains.

In January I tried to download the latest patch, but my password didn't work. I found out that it had expired six months earlier. McAfee has my phone number, address and e-mail address, yet I received no notification that my upgrade license had expired. Of course I would have renewed, as US\$30 is a pretty cheap way of protecting my electronic assets for a year.

But why on earth didn't a computer vendor, of all businesses, understand how to leverage the Internet to manage its customers, not to mention increase revenue and profit? Why did I have to make two phone calls, each of which had me wade through their automated phone system and take up their support people's time, to complete a simple license renewal I would have undertaken with an e-mail reminder six months earlier?

With all the detailed information the airlines have on fre-

quent fliers, why does the typical business flier who pays US\$1,000 to fly coast-to-coast midweek feel much less like a pampered client and more like a head of cattle? How often after making a big purchase (a stereo, a car, a mortgage) do you experience the personal touch of some meaningful follow-up? Maybe a phone call, a personal note.

Of course, CRM systems must concern themselves with far more lofty business functions, like integration of front-office applications with critical back-office applications, including accounting, inventory, order fulfillment and the like. By its nature, CRM is supposed to support many kinds of customer interactions, all designed to retain the customer for the long haul and ultimately boost the bottom line.

Just don't forget that business and selling is still about people. One of the CRM solution architect's most difficult yet utterly necessary undertakings is to imagine himself in the customer's shoes. Once there, ask yourself, "How would I want all this software, hardware and networking to treat me?"

The author, Bill Laberis, writes for US Computerworld.

ReVerse Engineering by Trevor D. Doobie

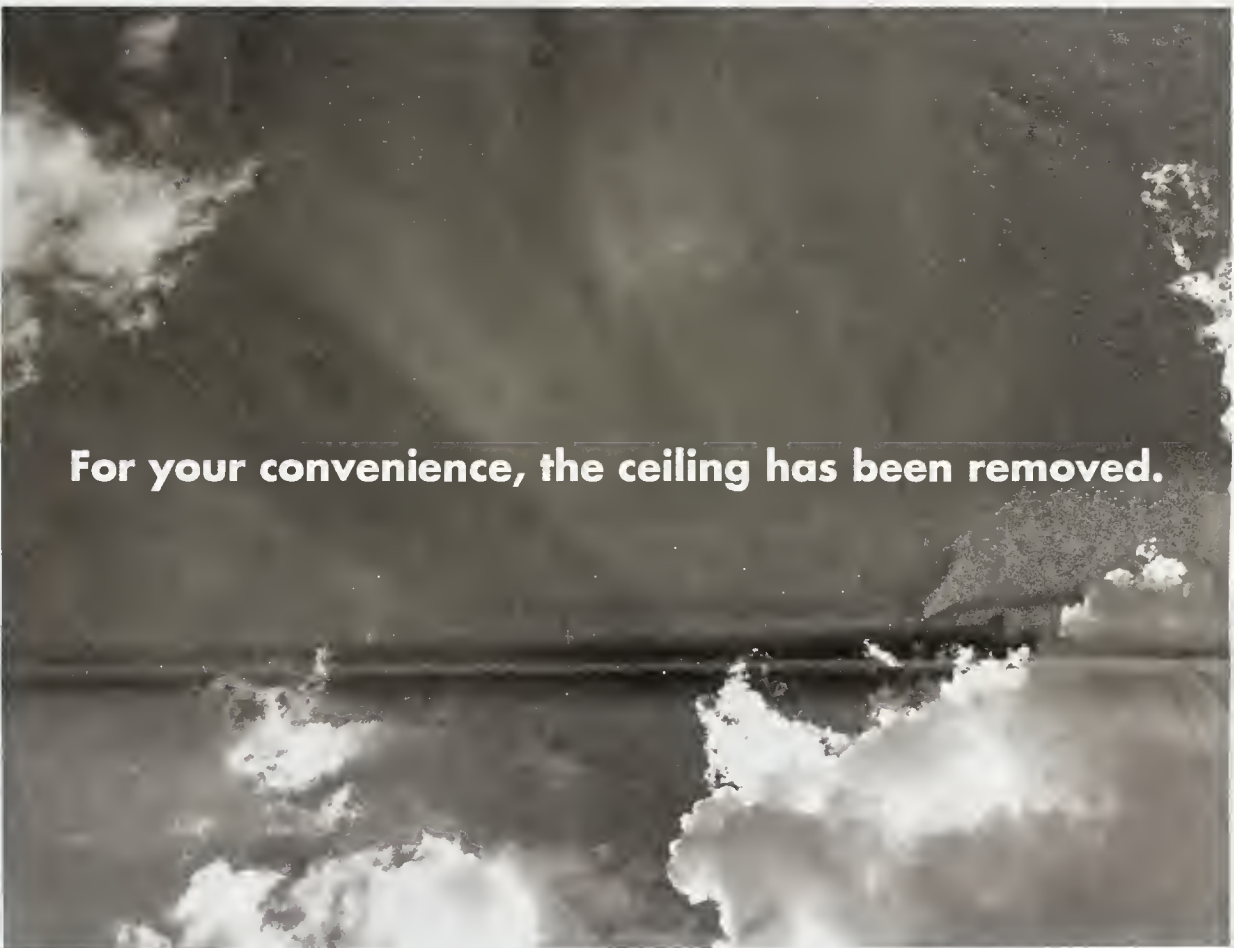
The Leaf of the Problem

The custom's that you pay
for that with which you play.
Download it to compare,
but pay for your software.
The Asia stats appall —
a pirate's shopping mall

I wonder, can it change?
Or is it just too strange?
An idea way too brash —
the swap of code for cash?
What we have come to see
is...people want it free.

Now Customs has a plan:
while pirates flout the ban
on bringing in CDs,
which people buy with ease,
the target now will be
plain folks like you and me.

End users, yes, are bad,
but this campaign seems mad.
In polished knee-high boots
they will ignore the roots
in favor of the leaves —
they'll chase the petty thieves.



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Hong Kong lacks readiness for digital age

By Megan Scott

Few local technology, telecommunications, media, and entertainment companies are ready for the digital age, according to an informal study conducted by PricewaterhouseCoopers last week at its Asia Convergence Conference in Hong Kong.

Of the 180 local business leaders attending the conference — of which more than half were managers, owners or partners of their companies — only 7 percent said their companies are ready for the digital age.

Digital delivery refers to the distribution of digital content, data and voice through a variety of media such as broadband fiber optic, cable modem, digital satellite, and digital terrestrial networks.

Meanwhile, 57 percent of respondents to the informal survey said they were aware of the issues involved in digital delivery but have not defined specific action plans yet while 27 percent said they were in the process of applying strategies and 9 percent said their companies hadn't considered digital

delivery in any serious way.

One industry observer, Pete Hitchen, senior Internet analyst at International Data Corp. (IDC) Asia-Pacific, was not surprised with the results of the survey, comparing the lack of preparedness for digital content delivery to the Year 2000 problem.

As with confusion over Y2K, many companies are not sure if they know how or what to do with respect to the digital age, said Hitchen.

This "wait and see" attitude towards digital delivery is typical

across Asia-Pacific, Hitchen said, pointing to the 57 percent of respondents opting for that route. With respect to adoption of digital content delivery, the finance, insurance, and government-backed organizations across Asia are the ones most likely to take the lead while the transportation and travel sectors will likely lag furthest behind, Hitchen said.

Even as companies begin to take advantage of the digital age, the question remains: are consumers ready, according to Marcel Fenez, leader of the tech-

nology, information, communications, and entertainment group at PricewaterhouseCoopers.

Forty-four percent of those polled said consumers' ease of access to the Internet was the most crucial factor for the success of digital delivery. Twenty-eight percent picked speed and quality as the most important factor while another 28 percent chose value-added services and pricing as equally important.

However, according to Hitchen, the most important factor for the Internet's success is comfort. "People in Asia-Pa-

cific just aren't comfortable with the Internet yet," he said.

When asked to name the best platform to reach consumers, 36 percent of respondents to the survey chose cable/terrestrial broadcasting, 27 percent picked the PC, 19 percent favored satellite broadcasting, and 18 percent elected Digital TV.

Despite its popularity, the future of the traditional PC is questionable with the advent of other devices such as WebTVs and handheld PCs, Hitchen said. The age of the PC is fading, he said.

DSL expected to outpace cable modems in Asia

By David Legard

IDG News Service, Singapore

DSL (Digital Subscriber Line) technology will outpace cable modems as the preferred high-bandwidth access method to the Internet. However, vendors need to offer a range of DSL options to suit business and consumer needs, according to Matthew Young, international development manager for the DSL business unit at

Ascend Communications.

DSL operates over existing copper telephone wire and is therefore cheaper to implement than cable access, and achieves its high data throughput by applying advanced digital signal processing techniques on the electrical signals passed along the wire.

Young said that while much of the recent focus has been on ADSL (Asymmetric DSL) and the related G.Lite technology,

SDSL (Symmetric DSL) is becoming increasingly popular. ADSL can deliver data download rates of up to 8Mbps and return upload rates of about 1Mbps, while SDSL provides rates of 2.3Mbps in both directions when full data compression is applied.

"Telecommunications companies are showing a lot of interest in SDSL, and businesses want it as well," he said. "ADSL is great, but

there are still some deployment issues."

Young said that in some Asian countries where the telecommunications infrastructure is poor, SDSL offers a more robust service than the faster ADSL, over greater distances.

"In some Asian countries, we have seen the copper wires seriously degraded, and because ADSL uses DMT [Discrete Multi-Tone] coding, this

can raise a lot of issues," he said. "If the lines are bad, it can limit the range over which ADSL can be deployed."

Ascend, which will become part of Lucent Technologies' Data Networking Services Group at the end of June when the merger between the two companies is completed, recently launched its DSL Max 20 access concentrator to compete in this market.

Young said that worldwide

sales of DSL equipment will double this year to US\$228 million and that DSL deployment will soon outstrip cable, even in the U.S. where cable currently has a significant lead.

"It will be about 18 months before DSL takes the lead in the U.S.," he said. "The telephone companies have so far been slow to deploy DSL and reduce the price of their services, but that is now changing."

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Dah Chong Hong revamps network design

By Sumner Lemon

Local trading company Dah Chong Hong (DCH) recently completed changes to its network infrastructure as part of a program to deploy an Oracle-based application designed to support its automotive sales and service business. Phase one of the application is expected to be deployed in June, with the second phase to be rolled out in August.

The application — which DCH officials have dubbed the Motor System — is designed to improve the level of customer service offered by the company and its dealers.

"Every customer would have their service record, their purchase record in the system," said Frank Tse, general manager of DCH's Group Information Technology Division. "That will enable us to take proactive action to approach customers, to launch certain marketing programs and to do a lot more in customer care. For example, we would send a letter to the customer saying, 'your car is about to [be due for its] second maintenance within the warranty period.'"

Another objective of implementing the Motor System is to make better use of customer data in order to promote sales and improve the efficiency of the company's marketing program, said Tse. As a side benefit, the Oracle-based application addresses several Y2K issues related to DCH's legacy Hitachi mainframe-based applications, he said.

Flexibility is another key aspect of the Motor System.

"With the old system it was very difficult to respond to change in a fast manner — it may take months, weeks to respond to change," said Tse. "The new system will give us the flexibility to respond to changes. Also, we would like this architecture to be a foundation for future developments."

And that means being prepared for e-commerce, he added.

Internet-based services that DCH could someday offer include "selling cars over the Internet or maybe these can link to our new business functions [such as] car leasing and limo services," said Tse.

For example, "if a guy brings in his car for servicing and we know that this car needs two weeks [to be serviced, the system] can trigger a request for car leasing or limo services," said Tse.

A redesigned network

To lay the groundwork for the new application, DCH in April completed work on redesigning its network infrastructure, switching from a leased-line architecture to one based on ATM and Frame Relay services provided by Hongkong Telecom.

Previously, remote sites were connected to DCH's Kowloon Bay headquarters over 50 separate leased lines, ranging in bandwidth capacity from



Tse: "We anticipated if we don't upgrade we will be paying roughly about HK\$1 million more a year."

9600bps to T1.

In addition to increasing the amount of bandwidth available to the company with the leased lines, the new ATM/Frame Relay-based network offers significant cost-savings.

"We anticipated if we don't upgrade or we don't change from a leased-line architecture to ATM/Frame Relay we will be paying roughly about HK\$1 million more a year," said Tse.

For the network upgrade, DCH tapped IBM, which had supplied RS/6000 servers for the Motor System.

While DCH had also approached Cisco Systems because of its tech-

nology and close relationship with Hongkong Telecom, the company ultimately went with IBM networking products.

The decision was made because IBM had already provided hardware for the Motor System and this offered a greater degree of comfort in the event that there were problems, said Tse.

The buck stops here

By deciding to go with a single vendor for computer hardware and networking equipment, Tse hopes to avoid the situation where DCH is caught between vendors trying to avoid taking responsibility for fixing a problem.

"Mixing vendors would create problems," he said.

It creates "problems in coordination, liaison, and responsibility issues. ... We don't want to see one vendor saying that it's not their problem, it's IBM's problem. And IBM saying it's not their problem, it's a [Hongkong] Telecom problem," said Tse.

Indeed, DCH has reason to feel that it made the right choice to go with IBM as a single vendor.

"We had a very bad situation at the end of last year when the machine [intended to run the Motor System] was almost fully loaded by the development people and we found there could be a problem with either the communication line, the [RS/6000],

or the PCs. We had to resolve it very quickly," said Tse.

At first, Tse suspected that the Oracle application was the culprit but software was quickly ruled out as the source of the problem.

"We suspected it could be an IBM problem. We talked to them and they reacted very quickly and tried to troubleshoot whether the problem was in the machine. The result was negative, but it didn't resolve our problem," said Tse.

With the problem still unsolved, DCH was facing the possibility of costly delays in its deployment of the application. If the system were to go down for "even one day it could cause our schedule to be delayed for a week," said Tse.

To get the issue resolved, Tse called his suppliers together. And even though IBM's hardware had already been ruled out as the root of the problem, the company's support staff was still willing to help.

"IBM would not close the door [on us] even though they said it wasn't their problem — they suspected it could be Oracle or [Hongkong] Telecom. And secondly, they helped us fully investigate the problem and provided monitoring tools," said Tse.

With IBM's assistance, the fault was finally identified as a leased-line problem and Hongkong Telecom was able to quickly supply extra bandwidth, resolving the problem to Tse's satisfaction, and allowing the deployment of the Motor System to proceed on schedule.

Japanese firms turn to Web procurement

By Rob Guth

IDG News Service, Tokyo

Japan's largest computer and consumer electronic vendors are turning to the Internet as part of broader moves to reduce their procurement and sales costs, representatives of the companies said last week.

Toshiba has opened a small division that later this year will set up a system for selling the vendor's products online and for procuring components for PCs and workstations over the Internet, a company spokesman said. Next year, the Japanese vendor will gradually expand the Internet procurement into other areas, including components for its heavy machinery products, according to Keisuke Ohmori, a spokesman at the company.

Though Toshiba's disparate business units have dabbled in online sales and procurement on their own, the new group, called the Electronic Commerce Strategy Planning Division, will coordinate such efforts across the company's business

groups, he said.

Ohmori said that "within a few years," Toshiba expects it will buy over the Internet about 20 percent of the 1.8 trillion yen (US\$14.6 billion) of components and supplies the company purchases each year. He could not specify the time frame for the goal nor estimate Toshiba's expected cost savings.

The significance of Japanese vendors' online plans lie in the potential scale. The country's computer and electronics makers, including Toshiba, NEC, Sony, and Fujitsu, are some of Japan's largest consumers of everything from stationery supplies to connectors used in electronics products.

"With some companies like [Japanese telecom carrier Nippon Telegraph & Telephone] having 150,000 employees, you can only imagine how much they consume," said Toshiaki Iba, an analyst at Tokyo Mitsubishi Securities. "Things



like pencils, rolls of toilet paper and autos — it's a huge amount."

The online procurement moves come as Japan's largest companies are searching for ways to slash costs

amid a protracted economic recession. Japan's electronics makers in recent months have embarked upon unprecedented restructuring exercises, in which the Internet is play-

ing a small but growing role.

Officials at Fujitsu's advertising department say they recently moved their procurement online and cut paper consumption by 215,000 sheets annually. The department's system, which can be accessed over Fujitsu's Web site, handles estimates, ordering and invoicing. Fujitsu pays for the materials by a common form of electronic bank transfer in Japan.

Each year, Fujitsu's advertising group buys about 20 billion yen of services and supplies over the Internet, a spokesman said. The system handles about 15,000 transactions a year from 200 suppliers, he said.

A spokesman at NEC last week said the company hopes to slash inventory and, in turn, cut costs through a new supply chain system, which enables companies to manage information relating to every stage of a product's life cycle including development and marketing. The spokesman could not comment on how the new system will use the Internet.

What's in a job title? Less and less, some say

By Steve Alexander
US InfoWorld

Traditional job titles for staff-level IT workers, such as programmer and systems analyst, used to define where people fit in the IT world. But those titles may be losing their luster in an era when skills and experience seem to outweigh titles in determining rank and pay.

"The issue is not the titles themselves, but that the roles people are playing are diversifying," says Michelle Mehli, a principal at Desaulniers MacLeod, a Chicago-based IT recruiting company.

Even the hierarchy of IT job titles is breaking down. For example, one version of the IT hierarchy lists these jobs in ascending order: programmer analyst, senior systems pro-

Hall thinks roles are more important than titles, but realizes that some job candidates value what goes on their business cards.

"I've had people turn down a job because it was labeled 'programmer' rather than 'senior programmer,'" Hall says. "It's absurd, but titles are very important to certain people."

There appears to be only a handful of non-management IT job titles whose definitions are widely accepted. Mehli suggests four: programmer, programmer analyst, systems analyst, and project manager.

Hall, however, says even those definitions can be fuzzy.

For example, a programmer may be called a software engineer, a software developer, or an application developer. A programmer analyst also might

technical expertise to make things happen in IT."

Adding to the confusion are job titles such as Windows NT network manager, which involve managing machines rather than people. Southwick says the NT community likes the title "network manager," while the Unix community favors the title "systems administrator." Both mean the same thing.

Finally, some companies create their own titles to differentiate themselves, adding to the title confusion.

"The use of a title is company-specific and is defined based on how that company designs work," says Ric Walter, assistant vice president of human resource operations at telecommunications operator Sprint's long-distance business in Kansas

City, Missouri. "We try to define jobs in a way that will be meaningful to people so they will see Sprint as the employer of choice." Some company-specific titles at Sprint are data analyst and network design analyst.

Titles are likely to get more confusing in the future.

"There was a time when responsibility was easily defined. Now it's a matrixed

world, and we're all working cross-functionally," says Phil Schneidermeyer, a recruiting executive at Korn/Ferry International, in Stamford, Connecticut. "The more the organizational lines get broken down and the flatter the organization gets, the harder it will be to pigeonhole people into nice, neat titles that go with nice, neat job responsibilities."



grammer, senior systems analyst, project manager, network administrator, and computer operations manager. But pay doesn't necessarily go in that order.

"There are network administrators who make a lot less money than senior systems analysts do," says Dave Hall, a principal at Search Connection, a Columbia, Maryland, IT recruiting company. "And while a computer operations manager who is managing a 20-person staff in an IBM shop may be making US\$60,000, a programmer with three years of experience may be making \$70,000."

Although IT recruiters say they still find traditional titles useful in finding full-time job candidates, those same titles often are judged to be inadequate or irrelevant by corporate hiring managers and by recruiters who specialize in finding jobs for IT contractors.

be called a senior programmer or a senior developer. In some companies there may be no distinction between a systems analyst and a programmer analyst. And a project manager's authority varies widely from one company to another.

Business analyst is one of the least well-defined IT titles. Most observers agree that it can mean a technical person with some business expertise, or a business person with some technical skills.

"The business analyst is a squishy job title, but it's important, and those people are hard to come by," says Tony Graffeo, divisional vice president for global information services and head of the internal IT department at Computer Associates International, in Islandia, New York. "There are technical people who know bits and bytes but can't speak in end-user terms, and business people who lack enough



Why there's no quick fix for Y2K on PCs

By John Cox

US Network World

With just more than six months to go before January 1, 2000, perhaps the most important thing network administrators can do is forget about killing the Year 2000 bug on networked desktops in one fell swoop.

Instead, network administrators should consider setting up a framework of procedures,

tools and systems to track the bug's appearances and make those problems easy to fix on corporate PCs and laptops. The bug exists because older software typically was not written to handle the date shifting from 1999 to 2000.

By now, it's clear that seeking a once-and-for-all solution to the desktop Y2K problem is a time-wasting illusion. On the surface, the problem seems sim-

ple to fix. But on PCs, there is a complex set of interactions among the operating system and other system software, such as the BIOS, as well as the panoply of desktop applications.

And not all the information on these desktop pieces is complete. In fact, many software vendors continue to find new Y2K-related problems that have to be fixed by issuing a steady stream of software updates or

patches. These discoveries render many bits of software once labeled "Y2K-compatible" as only "compatible, but with conditions."

"We've definitely seen an increase in the number of products [whose Y2K-compliance information is] being changed," says Kevin Weaver, executive vice president of Infoliant, a Pittsburgh firm that maintains a database of 30,000 software and

hardware products and their degree of Y2K compatibility. "Up until early 1999, it was just a few dozen products changing each month. Then it skyrocketed: Now there are 500 to 600 products per month being changed."

One step forward, two back

Earlier this month, Microsoft announced a new Y2K Web site and a Y2K education program for customers. This happened at almost the same time Microsoft was alerting Infoliant that some new Y2K problems had surfaced in Windows 95, which had been classified as Y2K-compliant. For instance, if users installed Dial-Up Networking 1.3 or Winsock2 before installing the Windows 95 Year 2000 update, the update software would not make the date change properly.

The complexity of keeping up with Y2K changes on the desktop can be seen by reviewing just a few of the products tracked by Infoliant's Y2K database (<http://www.infoliant.com>).

For instance, in order for Microsoft Exchange Server Enterprise Version 5.5 to be Y2K-compliant, customers must install Exchange 5.5 Service Pack 2. But if some of the Exchange Server components are not installed, then Service Pack 1 is compliant. The bottom line is that customer sites may have several different versions of the same software, all of which may require different fixes.

Infoliant's experts say most of the major changes in Y2K status have been made in the most popular PC applications. Yet the rate of Y2K status changes has sharply increased over the past few months as vendors uncover new, if relatively small or limited, problems.

Many of these new changes concern minor problems, or those that will occur only in certain circumstances or with a certain combination of software products in specific versions. Chris Spain, president and chief technology officer of Y2K vendor Shaman, says one customer discovered his company had 62,000 program titles, including auxiliary .exe files and subversions. Microsoft Office, alone, Spain notes, has nearly 20 auxiliary .exe files that have to be considered in a Y2K analysis.

Keeping up with this constant flow of change is only one challenge. Even more burdensome is applying each change to every PC in the company. For many, this still means sending out technicians, equipped with stacks of diskettes, comfortable shoes and strong leg muscles, to visit each desk in person and load the new software.

AutoNation of Fort Lauderdale, Florida, owns more than

400 car dealerships and several National and Alamo rental car agencies in the U.S. Last year, the company bought 2,000 Dell NetPCs with NT Workstation 4.0 to create a standard PC hardware and software package for its corporate headquarters, says Keith Holcomb, AutoNation's vice president of IT. The purchase also let AutoNation create a PC that seemed to be, at the time, Y2K-compliant.

"But when you have 150 different software packages, and the vendors are doing ongoing testing, they keep sending you an update that says, 'This release has two more Y2K patches,'" Holcomb says. "You never get 100 percent compliance."

Dell's sales staff suggested the use of On Technology's On Command CCM, which is software for desktop management and configuration. A piece of client code is loaded onto each PC communicating with the On Command server.

As AutoNation's Y2K technicians get new patches or updates from software vendors, they can test them quickly in a special lab, then program the On Command server to deliver and install the updates on the hard drives of each PC that requires an update. A process that once took days, even weeks, is now done in two or three hours. "We can deploy these fixes across the network to hundreds of machines at a time, without having to visit each one in person," Holcomb says.

Intelligent help

Shaman uses intelligent agents, which are loaded onto desktop PCs, to scoop up details about each piece of software, including the various .exe files and all sub-versions of each software title. The details are sent back to a server, called Enterprise Shaman, and compared to an online database of current data supplied by more than 250 software vendors. Enterprise Shaman can identify, among other things, which PC programs are Y2K-compatible and which are not.

"It's not a static situation," Shaman's Spain says. "You need to have an ongoing desktop discovery system that can continue to identify the exact fingerprint for each specific software version."

Using tools like these to create a management framework, users will be able to minimize the inevitable delays in responding to subsequent Y2K problems, especially in early 2000.

"If you're not ready, the combination of these delays could really be burdensome to your company," Holcomb warns.

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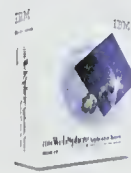
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Getting better value out of IT spending

By Daintry Duffy

CIO

In a large conference room in Germany, the corporate executives, IT managers and project staff of a telecom manufacturing company have gathered nervously around the table. It's rumored that they've been called in to account for the firm's hugely expensive and severely troubled ERP project. After introductions, a consultant walks over to a flip chart and writes: "[Name of company] wants to implement the ERP system for the purpose of _____" and asks those gathered to complete the sentence. Dead silence. Finally, the managing director leans over the table, looks down at the functional guys who've been pushing ERP hard and asks: "Well, isn't somebody going to answer him?"

Downcast eyes and apprehensive shifting in the conference room seats have heralded the demise of many a pricey technology initiative. When a project kicks off with much fanfare only to fizzle after months of work and millions of dollars the problem is seldom merely technical. In many cases, "companies aren't clear enough in terms of the concrete objectives that they want to come out of a project," points out F. Warren McFarlan, professor of business administration at Harvard Business School. "The fuzzier they get, the more likely they are to get burned."

But when technology initiatives such as ERP and Y2K become integral to business success, such a corporate scorching could prove fatal. And cautious CEOs realize this: they're keeping a sharper eye on IT investments and demanding more business value from the projects they do fund.

IT investment cutbacks

On April 30, 1998, *The Wall Street Journal* published a story alleging a "new" approach to corporate technology funding: a trend it called de-engineering. The *Journal* argued that the failure of so many expensive IT projects has caused companies to prune technology spending to the bare minimum and ax projects

where the business objectives were not clearly defined.

But what's so new about that? IS departments are no strangers to feast-or-famine funding. Companies vacillate from spending freely on IT for competitive advantage to periods of economic stringency, where budgets are cut in the name of a leaner and meaner IT model. What prevents de-engineering from being a fancy name for an ebb in the technology spending cycle is the new level of board-level involvement in IT spending decisions and the business-driven attitude they take toward those investments.

Certainly, CEOs have become more comfortable with technology. According to a 1998 A.T. Kearney study called "Strategic Information Technology and the CEO Agenda," 75 percent to 80 percent of surveyed CEOs and other senior executives rated their grasp of IT issues as fairly good or very good. As a result, "CEOs can ask better questions now," says Joel K. Manby, CEO of Saab Cars U.S.A. in Norcross, Georgia. "Because of that, they can avoid bigger mistakes." And by taking a

going to do in terms of growing sales or managing labor costs?"

CEOs and their brethren have good reason for their new hard-edged attitude: They're spending a lot of money. "IT expenditures as a percentage of revenues continue to creep up" by about 5 percent to 6 percent a year, says Dale Kutnick, CEO and co-research director of The Meta Group, a research company in Stamford, Connecticut. In fact, the A.T. Kearney study showed that 68 percent of companies expect to increase their levels of technology investment over the next three years. And by making technology issues commonplace in the boardroom, projects like ERP and Y2K also have a great deal to do with the CEO education process.

This increased understanding is reflected in the technology decisions that are being made in companies. In the wake of a wave of expensive technology projects, CEOs are looking for ways to make their IT dollar go further. Robert N. Charette, president of Itabhi, a risk-management consultancy in Fredericksburg, Virginia, sees the current IT climate as a

'Companies aren't clear enough in terms of the concrete objectives that they want to come out of a project. The fuzzier they get, the more likely they are to get burned.'

more active part in technology decision making, senior executives can drive down costs by more accurately linking technology expenditures with business goals.

Gerry Yeo, a partner for Deloitte Consulting's Consumer Business Practice in Jersey City, New Jersey, has noticed a distinct change in attitude from senior executives over the past three to five years. "When CIOs present a capital request to the board, directors now say, 'OK, demonstrate to me how IT is a competitive weapon,'" he says. "What's it

move toward balancing risk and opportunity. As the following stories illustrate, senior-level involvement can go a long way toward achieving that delicate equilibrium.

Alcatel: Keep it simple

When Serge Tchuruk took over as CEO of the troubled electronics and telecom giant in 1995, he chose simplicity as his business and technology watchword.

Tchuruk faced the task of reorganizing a corporate conglomerate so bloated and unwieldy that wits joked you

could sell an Alcatel company to Alcatel at least twice before anybody realized it already owned it. With 800 legally independent companies under its belt, the organizational and reporting structure at Alcatel was a mess.

His first order of business was to restructure and streamline the Paris-based company through judicious consolidation and sales of some busi-

nesses. But the task has presented unique technology challenges for Tchuruk. He wants Alcatel trimmed to one company per country, creating a basis for streamlined IS systems such as a common finance system — a task that will eventually crop 800 systems down to around 130. Unlike many of its peers, however, Alcatel has chosen to address those challenges by walking rather than running, a board-level decision based on some recent high-budget IT hiccups. For example, the company has gone through very expensive SAP implementations in the past few years, only to find out that its finance system worked in just two countries.

'When CIOs present a capital request to the board, directors now say, 'OK, demonstrate to me how IT is a competitive weapon? What's it going to do in terms of growing sales or managing labor costs?'

The frustrations that arose from that experience convinced the board of directors and Roland Scheel, Alcatel's director of advanced technologies, business processes and information systems, that future IT investments needed a new path. "An SAP project can cost around US\$100 million," says Scheel, and people take notice when that project is a disappointment. The decision from management was clear. "We will go a different way," he says.

That different way will kick in with the next big project, a customer order fulfillment system. The company had planned another full-blown SAP project, but in light of their previous experiences Scheel and Tchuruk swore off the whole-hog implementation in favor of a modular approach. Scheel and his team will analyze the existing customer order systems and identify holes that SAP can fill. Then they'll find the module that works best and integrate it into

the existing mainframe technology. The company has also divided the project into a series of smaller, more manageable projects that will take a maximum of six months to complete.

Scheel says the new approach could cost as little as one-tenth of a regular SAP implementation while providing 80 percent of the required functionality in a short time. "It'll go faster and cost less," he says, and hopefully Alcatel will reap the rewards immediately — instead of years down the road.

Saab: Keep it inexpensive

When Manby left his job as regional manager of U.S.-based auto manufacturer Saturn to become CEO of Saab Cars U.S.A. in June 1996, one of his first priorities was to refocus the company's IT investment strategy. Part of the problem lay with the IT director, who Manby says "was constantly chasing new technologies and was not disciplined about [identifying] the business problem first."

But Manby knew that he needed to get involved too. "[My role is to] ask all the tough questions and cut to the heart of the issue," he says. "I want to know: what are we trying to accom-

plish? What will be the business result? Is it achievable?" And rather than drag the company through a drawn-out implementation, which tries to solve everything at once, Manby's preference is to just get something up and running. "As long as it's scalable you can build upon it," he points out.

Manby wanted to get away from such bad-egg projects as Saab's data warehousing system, which had already cost the company several million dollars despite having little demonstrable business value. However, he did want a central system to track each car and its repair history. Saturn had one, and it was the backbone of the firm's successful customer service model. Manby wanted Saab to reap the same benefits, but at US\$11 million installing a system like those used at Saturn, Lexus, and Infiniti was prohibitively expensive. Additionally, the company would have to ask each of its 225 dealers to make a profit-crippling US\$100,000 investment in the system.

So Manby, working with his new hire, CIO Jerry Rode, came up with an intranet-based retail system that cost a fraction of the original proposal and required dealers to ante up only the price of a PC and some network equipment.

Called Iris, or Intranet Retail Information System, the private network lets Saab mechanics view the repair history of every car, comment on technical solutions and pull up examples of how other technicians solved particular problems. Information on car repairs and sales, which used to be batched monthly, is uploaded in real-time so that executives, dealers and technicians alike don't have to rely on outdated information.

Manby is pleased with Iris, and the company is now reexamining data warehousing with a stern eye on business value this time around. For Manby, the extra scrutiny is difficult but essential. "All of us [CEOs] feel a sense of pressure to be up to speed and be reading everything we can get our hands on about technology," he says. "Otherwise, you'll be left in the dust."

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Microsoft Internet Explorer

Lookup Book

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Patricia Collingworth

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Sequent rolls out midrange servers

Sequent Computer Systems has introduced midrange servers to its non-uniform memory access (NUMA) Q product line.

The NUMA-Q 1000 series brings Windows NT capability to the Unix midrange server market. The server is designed to be a platform for data marts, packaged applications and pilot programs for large-scale data center systems, officials said.

The NUMA-Q 1000 series includes four-way and eight-way Intel Pentium II Xeon processor-based servers built for Unix and is also re-deployable to run on Windows NT. In addition, the product shares the same Intel-branded architecture, multi-pathing Unix operating system, peripherals, clusters and layered software as NUMA-Q 2000. Applications in pilot testing or development can be re-deployed on the high-end platform without additional tuning, company officials said.

Once re-deployed to the NUMA-Q 2000, applications developed or



The NUMA-Q 1000 series includes four-way and eight-way Intel Pentium II Xeon processor-based servers built for Unix and is also re-deployable to run on Windows NT.

tuned for NUMA-Q 1000 can take advantage of scalability to 64-bit processors. 64G main memory and several terabytes of storage.

High availability is supported through redundant and hot-swappable components, multiple Unix operating system paths between server and stor-

age devices, dynamic load balancing and clustering.

Sequent also offers a single set of management and administration tools across its NUMA-Q 1000 and NUMA-Q 2000 platforms. For Unix, Sequent's Application Region Manager partitioning software enables performance tuning, workload management and server consolidation. Many general system administrative procedures operate under one interface and console for both Unix and Windows NT, including system booting, monitoring, diagnostics and remote service.

The Sequent NUMA-Q 1000 server is currently available in Hong Kong for US\$93,583 for the NUMA-Q 1000 4 Pentium II Xeon 400MHz with 1G of RAM; the NUMA-Q 1000 8 Pentium II Xeon 400MHz with 2G of RAM is \$188,683.

For more information, contact Sequent by phone at 2802-3133, by fax at 2802-1800 or visit its Web site at <http://www.sequent.com>.

Seagate introduces shock resistant disk drive family

Seagate recently unveiled its Medalist 17242 desktop disk drive family designed for the mainstream and entry level PC market. Incorporating Ultra ATA/66 interface and Seagate's Expanded SeaShield System, the suite provides a non-operating shock specification of 300G needed for virtual CD applications, rendering animation; computer-based training; movies; Internet caching, and other entertainment and business applications, company officials said.

The Seagate Medalist 17242 family features the Ultra ATA/66 interface which doubles the data transfer rates of the Ultra ATA/33 to 66.6 Mbps. The drive is 100 percent backward compatible with both Ultra ATA/33 and DMA and with existing ATA/EIDE hard drives, CD-ROM drives, and host systems.

The Medalist 17242 family includes Seagate's SeaShield System which is designed to shield users' information from common problems with enhanced handling and ESD protection; installation aids including DiscWizard; data integrity features including S.M.A.R.T.; ECC and Safe Spinning and Drive Self Test (DST).

With capacity ranging from 4.3G to 17.2G, the 5400rpm Medalist 17242 family combines a 512K buffer and an internal transfer rate up to 188Mbps.

The Seagate Medalist 17242 family is currently available in Hong Kong for prices ranging between HK\$820 for the 4.3G model and \$1,350 for the 13G model.

For more information, contact Laser Computer by phone at 2305-2228 or by fax at 2753-0337.



The Seagate Medalist 17242 family features the Ultra ATA/66 interface which doubles the data transfer rates of the Ultra ATA/33 to 66.6 Mbps.

Agfa offers 1.5 million pixel digital camera

Agfa, a provider of digital cameras and desktop scanners, recently introduced the ePhoto CL30.

The digital camera features both an optical viewfinder and 1.8-inch color LCD screen. In addition, the product operates on four AA-sized batteries and ships with a 4M CompactFlash card — enough storage capacity for six to 36 images depending on the resolution setting, officials said.

The ePhoto CL30 offers image resolution of 1.5 million pixels and a 2X digital zoom.

In addition, the CL30 features both USB and serial downloading capabilities. The USB interface enables data transfer up to ten times the rate of serial communication. In addition, the USB allows users to plug and unplug the ePhoto CL30 and switch with other USB devices without having to reboot the PC.

Agfa's ePhoto CL30 delivers pic-



The ePhoto CL30 offers image resolution of 1.5 million pixels and a 2X digital zoom.

tures from a one million pixel CCD sensor using the company's PhotoGenie technology. The PhotoGenie removes image artifacts, such as JPEG compression, pixelation, jagged edges, and posterization. PhotoGenie also increases the resolution of pictures taken using the ePhoto CL30's highest capture mode to produce photo quality

images with 1440-by-1080 pixels.

All camera settings on the ePhoto CL30 are accessed using the EasyPilot button. The EasyPilot is a multi-function control that works like a computer mouse and allows users to scroll through menus while providing point-and-click selection control.

The ePhoto CL30 ships with Agfa's PhotoWise software, an application for accessing, managing and enhancing digital photos. PhotoWise provides OLE 2.0 support for drag-and-drop, as well as in-place editing for OLE compliant applications and runs on Windows 98, Windows 95, and Windows NT.

The Agfa ePhoto CL30 will be available in July for HK\$3,000.

For more information, contact Agfa by phone at 2555-9421, by fax at 2555-2480 or visit its Web site at <http://www.agfahome.com.hk>.

StorageTek ships tape system

StorageTek recently announced its Timber Wolf Tape Library Monitor — an automated tape library management system.

The system is certified to run with both Hewlett-Packard's OpenView Network Node Manager and Computer Associates' Unicenter TNG enterprise management software.

StorageTek's Timber Wolf Library Monitor software provides a centralized view that allows users to identify abnormal events, warnings or failures so administrators can respond to problems and minimize system downtime.

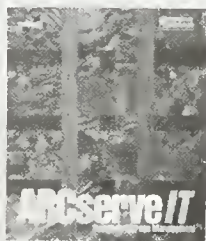
In addition, StorageTek's library management software allows users to monitor the library's basic configuration and status. Using the management station, a single operator can monitor several libraries. With the event handling feature, operators can be called or paged which may reduce operation costs and ensure that critical jobs are completed on schedule, officials said.

The Timber Wolf Library Monitor supports libraries connected to standard Unix and Windows NT systems and is compliant with all backup/restore software packages.

The StorageTek Timber Wolf Tape Library Monitor is currently available for US\$2,000 for the initial monitor and \$1,000 for each server with connected libraries.

For more information, contact COL by phone at 2116-3888, or by fax at 2118-3088.

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International Database Conference (IDC'99)

Heterogeneous and Internet Database

For those exploring, currently involved in, or evaluating the advanced technologies of Heterogeneous and Internet Database

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15 July (Tutorial)
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City University of Hong Kong

Among today's information technologies, it has become apparent that the Internet has incredible potential to form the basis or foundation of an infrastructure. It is clearly an important part of the emerging electronic commerce market. Companies are establishing external home pages to communicate product and service information to potential and existing customers, and investing in Internet home pages that spread internal textual data throughout the organization. A more interesting manifestation of the Internet is the foundation of the client/server infrastructure. Companies that produce tools for database access are beginning to tie their products into the Internet. The issue of accessing a remote database through the Internet has posed interesting problem for many database practitioners and researchers, especially in the area of performance, security and reliability of an Internet database system.

Industrial Stream Highlights

- Ultra-small Database for Mobile Devices
- Enterprise Java Bean and Java Blend
- Visual Business Intelligent
- E-Commerce
- Information Systems Reengineering
- Universal Database
- Database Services to Internet

Academic Stream Highlights

- Internet-enabled Knowledge Discovery
- COBRA-based Distributed Components
- Data Warehousing
- Data Mining
- Frame Model
- Internet Database
- Database Reengineering

In-Depth Pre-Conference Tutorial

- Building Web Application using HTML/XML
- COBRA as an Internet Infrastructure for Client/Server Applications
- SOL3 standard and ORDBMS development
- Schema and Database Conversion using SQL

Background

The first International Database Workshop was held in Hong Kong in December 1989, organized by the Hong Kong Computer Society and Hong Kong Polytechnic. Its main objective was to promote database technologies in Hong Kong. Its scope was broad coverage of database advanced technologies, methodologies and software tools. The workshop has been transformed into an international conference ever since.

Who Should Attend:

Project Managers
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Data Warehouse Managers
Researchers
IT Managers
CIO'S
Strategic Planners
Others, interested in Heterogeneous and Internet Databases

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When & Where

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64 Mody Road, Kowloon, Hong Kong

Pre-Conference Tutorial:
15 July, 9:00am-5:00pm City University of Hong Kong,
Tat Chee Avenue, Kowloon, Hong Kong

Dinner:
17 July, 7:00pm - 9:30 pm, with Speakers and Participants
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Contacts

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Tat Chee Avenue, Kowloon, Hong Kong.

BY FAX: (852)27888614

BY EMAIL: csj.fong@cityu.edu.hk

Programmes

Academic Stream	Industrial Stream
Internet: The New Frontier of Database Applications <i>Peter Chen, Louisiana State University (Entity Relationship Model Inventor)</i>	Evolution from 2-tier client/server architecture to n-tier component architecture using Internet - Web technology <i>John Tse, Deputy Director, Hospital Authority</i>
Building a Cyber Industry in Hong Kong, can we? <i>Edward Yang, Chair Professor, City University of Hong Kong</i>	Legal issues on Internet Commerce <i>Sin Chung Kai, Legislative Council</i>
An Internet-enabled Knowledge Discovery Process <i>Alex Bichner, Maurice Mulvenna, Sarab Anand, John Hughes, University of Ulster</i>	Experience of building and using the enterprise DB, the tools and future expectations <i>Betty Tsui, Vice President, Operation and Technology, Citibank</i>
A Case Study on Application Development with CORBA-based Distributed Components <i>HW Chiu, Steve Chan, City University of Hong Kong</i>	Internet and Information for the 21st Century <i>Danyll Wills, Oracle Greater China</i>
An Approach to Convert Semi-structured Data from the Web into Structured Data in Relational Databases <i>Edmund Mak and Qing Li, Hong Kong Institute of Education</i>	Java Bean and Java Blend <i>Kenneth Lui, Sun Microsystems</i>
Generic Multimedia Documents for the WWW using an object DBMS <i>Herve Martin and Philippe Mulhem, LSR - IMAG</i>	Visual Business Intelligent - A New Class of Applications <i>Serina Lee, Informix Software (HK) Ltd</i>
Evaluating the Client Side Approach and the Server Side Approach to the WWW and DBMSs Integration <i>Wilfred Ng, Hong Kong Polytechnic University</i>	Database on the move, DB2 mobile computing <i>Clarence Sham, IBM China/Hong Kong Limited</i>
Jmaster: A Java Database Connectivity Platform for Access to Multiple Heterogeneous Databases <i>JM Seo, ES Jin, SY Yoon, JW Song, Korea University</i>	Analyzing Your E-Commerce Customers' Performance and Behavior <i>Stephen Yoo, Informix Software (HK) Ltd</i>
WODA: A Slim Web Oriented Database <i>Ziga Turk, University of Ljubljana</i>	Information Systems Reengineering Tool <i>Sunny Ho, IT Partners Limited</i>
A Meta-data management system for data warehouse <i>SM Huang, TM Hung, Joseph Fong, Tatung Institute of Technology</i>	Integrating Enterprise Information to the Palm of your hand with Sybase UltraLite and MobiLink <i>Melvin Lam, Sybase Hong Kong Limited</i>
	Extending Database Services to the Internet <i>Ray Ruff, Sybase Hong Kong Limited</i>
	Building an end to end e-commerce solution - merchant store front POS <i>Joseph Lee, Topsoft Limited</i>

20 more speakers

Pre-Conference Tutorial:

- Building Web Applications using HTML/XML
- Professor Peter Chen (ER model inventor), Louisiana State University
- Overview of COBRA as an Internet Infrastructure for Client/Server Applications
- Dr Andy Chun, City University of Hong Kong
- Informix's implementation of object-relational capabilities as it exists in the IDS/UD product
- Zelaine Fong, Informix Limited
- Schema and Database Conversion using SQL
- Ringo Pang, City University of Hong Kong

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NDS 8 improves scalability, performance

By Jeff Symoen

US InfoWorld

Novell Directory Services (NDS) has long been the market leader in the NOS-integrated directory services market space. But Novell has struggled somewhat in the application directory market. Competing with Netscape's Directory Server and other Lightweight Directory Access Protocol (LDAP) products has been difficult, chiefly because of performance and scalability concerns. But NDS 8, released recently on Novell's Web site, definitely brings Novell back into the game.

With the explosion of Internet-based applications, some of which require the back-end directory to scale well beyond 1 million object entries while maintaining respectable performance, NDS has been virtually discarded as an option for large Internet-based applications and ISPs looking to adopt directories to host customer data. And with Microsoft's Active Directory now on the horizon, Novell had to find a way to increase the performance and scalability of NDS to stay ahead of the pack.

The main performance concern with NDS as an application-based directory is LDAP. NDS has not been a strong performer in this area, and it has lacked support for specific LDAP-based properties, such as the LDAP domain property. NDS 8 answers these questions.

Deploying NDS 8 in your organization should result in cost savings associated with improving directory scalability, performance, and maintenance. If you are looking to deploy NDS 8 as an application directory, you should be able to reduce support costs through directory standardization for both the NOS and applications.

In NDS 8, Novell has totally redesigned the NDS database architecture — the company says it has tested the new architecture with more than a billion objects (although I was not able to verify this claim in my tests). Central to the redesign of NDS is the inclusion of specific indexes, such as substring indexes for the common name and unique ID data fields, within the NDS database, which provides a nice boost in query performance.

Another important improvement is the native implementation of the LDAP 3 protocol into the directory. This should serve to improve query performance. I found that setting up NDS for LDAP access was basically seamless, in contrast to some difficulties I had experienced with the previous LDAP connector add-on. I also found that LDAP query performance was fairly respectable in my tests.

Novell claims NDS should be able to sustain 200 to 300 queries per second, a definite improvement over prior versions. But Netscape claims performance of about 5,000 queries per second. Some side benefits of NDS 8 that are not directly related to directory performance are a new and improved version of Novell's ConsoleOne Administration tool, a hatch-load directory population tool, and an updated version of DSRepair (dsrepair.nlm).

I found the new version of ConsoleOne to be a solid improvement over the version released in NetWare 5. The new version, ConsoleOne 1.2, provides better support for various NDS object types and

is quite a bit peppier than the prior version. However, ConsoleOne still performs quite a bit more slowly than NetWare Administrator, and there still is not complete feature parity between the two administration tools. In addition, after my upgrade when I loaded ConsoleOne from the NetWare graphical console, the older version of the tool continued to load instead of the new one.

Novell also includes a new bulk load.nlm, which I was able to use to import users into the directory from a standard LDAP Data Interchange Format file. I found this method of populating the directory quite effective. I was able to import 500 users in about 2 seconds. My 100,000-user file took a little more than 1 minute to process.

Finally, the new version of DSRepair that ships with NDS 8 enables administrators to perform some maintenance options, such as performing structure checks and repairing the NDS database, without actually locking the database. Therefore, these operations can now take place without disrupting service to end users.

Overall, NDS 8 provides

marked improvements over the current technology. And since the product is free to NetWare customers, there is good reason to perform the upgrade for current sites.

However, read the installation notes carefully; there are a number of conditions that may need to be met to ensure

success in your environment.

If you are considering NDS to support an application, this release really begins to make the technology suitable to that task. But I recommend performing query performance tests with your final candidates before you make that decision.

THE BOTTOM LINE: VERY GOOD

Novell Directory Services (NDS) 8

This update to Novell's NOS-integrated directory services provides better scalability and performance, as well as new support tools for improved maintenance and management options.

NDS 8 is ideal as a back end for Internet-based directory-enabled applications. For current NetWare sites, it will provide greater directory scalability and performance, plus reduced maintenance downtime.

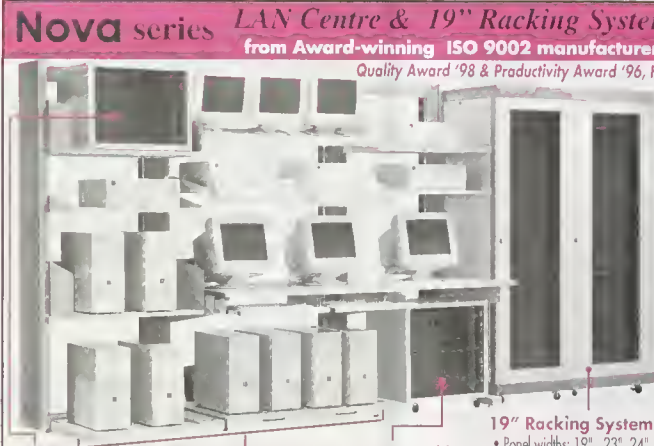
Pros: Improves scalability and performance; ConsoleOne provides better performance and directory object support; Bulkload.nlm tool makes it easy to quickly populate the directory.

Cons: ConsoleOne still does not offer full feature parity with NetWare Administrator and could still use some performance improvements.

Platform: Requires NDS 4.10 (or later) on all servers and NetWare 5 (with Support Pack 2) on at least one server.

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Xircom

Quarter Two 1999

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Xircom enters the Handheld PC Connectivity Market

CompactCard™ Ethernet 10

Exciting end-user programs for APAC

Xircom RealPort™ Trade-In Program, 30-Day Evaluation Program and Xcessories™ Fulfilment Program

New members of the RealPort Integrated PC Card family

RealPort Ethernet 10

RealPort Modem 56

Xircom - Your partner in wireless data communications

Latest! Nokia 6110/5110 GSM support on all Xircom 56K GlobalACCESS™ modems

Mobile Connectivity 101 for Aussie Teachers

*Xircom signs deal to supply 37,000 RealPort Integrated PC Cards
to Victoria Department of Education*

Winning streak for Xircom RealPort Integrated PC Card

Xircom RealPort Integrated PC Card wins Awards

Try RealView™ and see...

RealView, the latest PC Card Management Software from Xircom

"Kill the connector" dog steals the show!

Xircom at N+I Singapore '99

We have moved

New office for expanding workforce





Xircom enters the Handheld PC Connectivity Market

Statistics show that Handheld PCs are emerging as the next wave in the mobile computing revolution. According to International Data Corporation (IDC), 8.9 million handheld companions will ship in 2000, representing a 36.7% increase over 1999. Windows CE is expected to be the dominant handheld companion operating system in 2000 with a 48.3% market share worldwide (IDC). Xircom aims to speed the adoption of handhelds as true global business tools in the enterprise by launching the CompactCard family of products to connect the handhelds to crucial corporate data anytime, anywhere. These Type II CompactFlash cards support all Windows CE-based Handheld PCs and provide a variety of functions including Ethernet, modem and wireless GSM connectivity. The first in a series of Xircom CompactCards is the CompactCard Ethernet 10.

COMPACTCARD ETHERNET 10

Network card in Compact Flash form factor providing handheld PC users access to 10Mbps Ethernet networks

The Xircom CompactCard Ethernet 10 is designed for Windows CE 2.0 or higher, providing handheld PC users with reliable access to 10Mbps networks in the office. This Type II Compact Flash card enables you to access a wide variety of enterprise systems and seamlessly synchronize, communicate and exchange information with Windows-based PCs. This low-power CompactCard features BatterySave advanced power management for longer battery life and diagnostic LEDs. This handheld connectivity solution includes a CardCaddy™ converter for Type II PC Card-equipped handhelds.



Exciting end-user programs for APAC

REALPORT TRADE-IN PROGRAM

The RealPort Trade-In program allows you to trade in your installed Type II PC Cards (any brand from any vendor including Xircom) for cash when you purchase a minimum of five RealPort Integrated PC Cards. Within 60 days of purchase, you can return your old PC Cards and receive up to US\$50 for each RealPort Integrated PC Card. (Trade-in savings are based on RealPort products purchased and not the products returned.) It is not necessary to provide the invoice for the units traded in but we need proof of purchase for the RealPort Integrated PC Card purchased.

The RealPort Trade-In Program in Australia, Hong Kong and Singapore will end on June 30th, 1999. The same program in Malaysia and New Zealand will end on September 30th, 1999. For more details, visit our website at www.xircom.com/trade-in

REALPORT EVALUATION PROGRAM

The Xircom 30-day Evaluation Program gives corporate users an opportunity to test-drive any Xircom product FREE for 30 days (one product per customer; Xcessories not included). After the 30-day trial period, you may keep the unit at a special price, or simply return it to us, no purchase required. This is an ongoing program in Australia, Hong Kong, Malaysia, New Zealand and Singapore. For more details, visit our website at www.xircom.com/eval

XCESSORIES FULFILMENT PROGRAM

The Xcessories Fulfilment Program makes it easier for you to buy spare or replacement cables when you are in a hurry. Besides approaching our regular channels for replacement cables, you now have the option of buying cables directly from Xircom. Sold at the local Suggested Retail Price (SRP), customers can expect to receive their replacement cable order within 5 working days of placing their orders. This new program just started on April 1 and is available in Australia, Hong Kong, Malaysia, New Zealand and Singapore. For more details, visit our website at www.xircom.com/apac_xfs

PROGRAM HOTLINE

To participate or enquire about any of the above end-user programs, please contact your local representative:

Australia	Hong Kong	Malaysia	New Zealand	Singapore
Tel: 1800 146 923	Tel: 800 903 759	Tel: 1800 801 693	Tel: 0800 449 167	Tel: 1800 744 4360

The hotline operational hours are Monday to Friday (excluding public holidays), 9am to 5pm (local time).

Xircom reserves the right to modify or discontinue the programs at any time.



Mobile Connectivity 101 for Aussie Teachers

XIRCOM SIGNS DEAL TO SUPPLY 37,000 REALPORT INTEGRATED PC CARDS TO THE VICTORIA DEPARTMENT OF EDUCATION

Our largest education sales agreement to date was signed with the Victoria Department of Education in Australia to provide RealPort Ethernet 10/100 Integrated PC Cards as communication solutions for teachers' notebook PCs. Under the terms of the agreement, Xircom will supply the school system with up to 37,000 RealPort Ethernet 10/100 Integrated PC Cards over a five year period for its Acer notebook PCs. "With no external dongles to break or lose, the Xircom RealPort

Ethernet 10/100 Integrated PC Cards are not only easier to use but they also lower our total cost of ownership," said Paul Doherty, Victoria Department of Education IT manager. "The adapters' built-in connectors and high-performance Ethernet technology provide our teachers with simple and reliable connections to the local area network so they can spend less time with technical support and more time with students."



GERALD J. MAKOS

DIRECTOR OF MARKETING
XIRCOM ASIA PACIFIC



Inaugural Message from the Director

Welcome to the first issue of the APAC edition of Mobile Connect from Xircom. This quarterly newsletter is specially tailored for the region to provide valuable information for all friends of Xircom. In it, we want to share with you product highlights, promotions, trends and events in the mobile industry.

With the launch of the RealPort Ethernet 10/100+ Modem 56 product in March of 1998 and the subsequent release of eight new products in the RealPort Integrated PC Card family, Xircom has experienced record sales and record earnings. Net sales for the second quarter of fiscal year 1999, ended March 31, 1999 was US\$97.7 million, a 52% increase compared to US\$64.1 million for the same period last year. Net sales for the first six months of 1999 totalled US\$193.7 million compared to the US\$116.7 million reported last year.

Despite the recent Asia-Pacific economic crisis, Xircom still experienced growth of 16% in net sales during the first six months of 1999 compared to the first six months of 1998 for the APAC region. We have increased the headcount of our sales and marketing team throughout the region so as to continue our efforts overall. We have even moved to larger offices to accommodate for the expanding workforce.

In the coming months, we will be delivering more exciting news and innovative products for this region so be sure to subscribe for upcoming issues of Mobile Connect.

A handwritten signature in black ink, appearing to read "Gerald J. Makos".

Yours sincerely

Gerald J. Makos

Director of Marketing

Xircom Asia Pacific



New members of the RealPort Integrated PC Card family



REALPORT ETHERNET 10

The RealPort Ethernet 10 is a fully integrated PC card that connects notebook users to a 10Mbps Ethernet network. The RJ-45 connector is fully integrated, providing a robust, reliable and easy-to-use solution. Like all other RealPort Integrated PC Cards, it eliminates the problem of broken cables and pop-up jacks.

- Features include:
- Integrated 10Mbps Ethernet LAN connector
 - Full-duplex operation and Advanced Look-Ahead Pipelining increase Ethernet throughput up to 60 percent
 - LAN LEDs provide status information at a glance



REALPORT MODEM 56

The RealPort Modem 56 is specially designed for mobile users who do not travel internationally and require a robust, cost-effective 56K modem. The two versions available in Asia Pacific are RM56V1 and RM56V2. RM56V1 is approved for use in Japan, Korea, Singapore, Malaysia, US and Canada. It may also be used in countries not requiring approvals, namely China, Hong Kong, Taiwan, Thailand, India, Indonesia and Philippines. RM56V2 is for use in Australia and New Zealand only. For users who travel outside the country of purchase, our range of GlobalACCESS™ modems is recommended.

- Features include:
- Integrated modem and telephone handset pass-thru connectors provide reliable cable-free connectivity
 - LEDs for status information at a glance
 - Digital Shield™ protects modem from high-current digital phones lines
 - BatterySave advanced power management powers down adapter into low-power sleep mode when not in use for longer battery life
 - Wake-on-Ring reduces power consumption by detecting the ring of an incoming call and allowing receipt of information when the system is in power saving mode
 - V.90 and K56flex support
 - No cables to lose or forget

For more information about our revolutionary RealPort Integrated PC Card, please visit our website at www.xircom.com/products/realport

Xircom - Your partner in wireless Data Communications



Xircom extends its GSM support on all 56K modems by offering GSM Connection Kits for popular Nokia 5110, 6110 and compatible handsets over GSM/DCS 1800 and PCS 1900 networks. The Xircom GSM Connection Kits enable users to access E-mail, surf the Internet and other online services or send and receive faxes over a wireless GSM link at speeds up to 9600bps (38,400bps with compression).

The GSM Connection Kit for Nokia handsets is different depending on the type of Xircom modem adaptor you are using, however the features, the price and product references are consistent throughout the product range.

For a complete list of supported phones from Ericsson, Nokia, Siemens and Sony, visit the Xircom website at www.xircom.com/GSM

MODEL NO.	PRODUCT	HANDSET SUPPORT	AVAILABILITY
RGSMCK-NOK-3	RealPort CardBus Ethernet 10/100+Modem 56 RealPort Ethernet 10/100+Modem 56 RealPort Ethernet+Modem 56 RealPort CardBus Modem 56-GlobalACCESS RealPort Modem 56-GlobalACCESS	Nokia 5110, 5130, 5150, 5190, 6110, 6130, 6150 and 6190 handsets	Now
GSMCK-NOK-3	CardBus Ethernet 10/100+Modem 56	Same as above	May 1999
GSMCK2-56NOK-3	CreditCard Ethernet 10/100+Modem 56 CreditCard Modem 56-GlobalACCESS	Same as above	May 1999

Xircom RealPort Integrated PC Card wins awards

XIRCOM HAS RECEIVED MANY INDUSTRY AWARDS AND ACCOLADES FOR THE REALPORT INTEGRATED PC CARD

Since the launch of the RealPort Integrated PC Card in March 1998, Xircom has received many industry awards and accolades for the RealPort Integrated PC Card. Within the Asia Pacific region, we have been awarded the following:

I.T. Times
"Best Sellers of 1998"
"Xircom's runaway success with their RealPort PC Card is unprecedented."

ACW Comdex/Asia Show
"Best Mobile Computing Product"
"This product solves a major problem of having to carry around a lot of connectors in mobile computing because it doesn't require special network connectors."

APC Magazine

Some of the awards we have received worldwide include:

- PC Computing "MVP Award"
- Computer Telephony "Editor's Choice"
- PC Magazine/U.K. "Technical Innovation Award"
- CM Corporate "Editor's Choice"
- PC World Belgium "Editor's Choice"
- PC Direkt/Germany "Editor's Choice"
- Mobile Computing & Communications "Mobility Award"
- Deloitte & Touche "Los Angeles Technology Fast 50"
- Xynetix Design Challenge "Best of Show"



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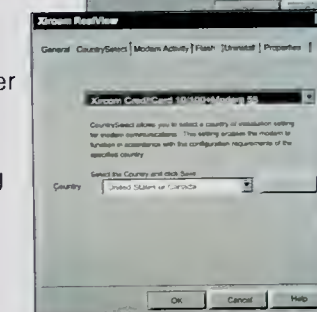
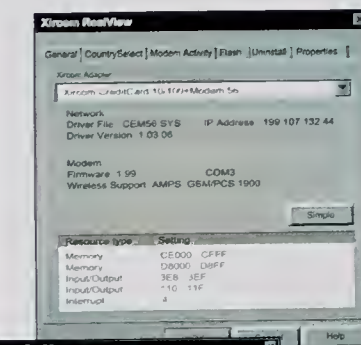
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- Un-install - Un-installs Xircom PC Cards
- Properties - Changes the properties of RealView

RealView is available as a free download from our website at www.xircom.com/downset.html

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com PC Cards, including LAN driver wireless capability

Country - Selects the country for Xircom GlobalACCESS modems



We have moved

On March 26, 1999, Xircom Asia Pacific moved from our former Shenton Way address to our new location at Great World City. The move was necessary to accommodate for the expanding workforce.

This is what Gerald J. Makos, director of marketing, Xircom Asia Pacific, had to say about the move, "Despite the recent Asia Pacific economic crisis, Xircom still sees continued growth throughout the region. We have increased the headcount of our sales and marketing team so as to continue our efforts overall."

The new headquarters is approximately twice the size of the previous location. Xircom Asia Pacific provides sales, marketing and customer support across more than twelve countries in the region.

NEW ADDRESS AND PHONE NUMBERS


Customers and business partners can now reach Xircom Asia Pacific at:

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asiats@xircom.com Customer Support Email (remains unchanged)

Xircom RealPort Integrated PC Card **wins awards**

XIRCUM HAS RECEIVED MANY INDUSTRY AWARDS AND ACCOLADES FOR THE REALPORT INTEGRATED PC CARD

Since the launch of the RealPort Integrated PC Card in March 1998, Xircom has received many industry awards and accolades for the RealPort Integrated PC Card. Within the Asia Pacific region, we have been awarded the following:

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|  | I.T. Times
"Best Sellers of 1998"
<i>"Xircom's runaway success with their RealPort PC Card is unprecedented."</i> |  | Some of the awards we have received worldwide include: |
|  | ACW Comdex/Asia Show
"Best Mobile Computing Product"
<i>"This product solves a major problem of having to carry around a lot of connectors in mobile computing because it doesn't require special network connectors."</i> |  | PC Computing "MVP Award" |
|  | APC Magazine
"Best Mobile Product of The Year" Award
<i>"The award takes into account the products that make the road warrior concept a reality."</i> |  | Computer Telephony "Editor's Choice" |
| | |  | PC Magazine/U.K. "Technical Innovation Award" |
| | |  | CM Corporate "Editor's Choice" |
| | |  | PC World Belgium "Editor's Choice" |
| | |  | PC Direkt/Germany "Editor's Choice" |
| | |  | Mobile Computing & Communications "Mobility Award" |
| | |  | Deloitte & Touche "Los Angeles Technology Fast 50" |
| | |  | Xynetix Design Challenge "Best of Show" |

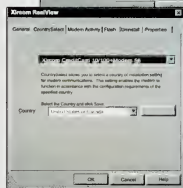
Try RealView and see...

RealView is highly customisable. It is designed to meet the needs of IS departments that support fleets of notebook users with Xircom PC Cards installed. IS departments can easily change the default configuration settings for RealView and deploy those settings to their users' PC Card. This includes modifying RealView file locations, setting default directories for modem firmware and log files and changing the appearance of RealView. IS departments can even turn features off if they don't want their users to have access to them. RealView is a 32-bit Windows application and supports Windows 95, Windows 98 and Windows NT.

RealView has 6 key functions:

- | | |
|-----------------------|--|
| General | - Displays summary information about Xircom PC Cards, including LAN driver version, modem firmware version and wireless capability |
| CountrySelect | - Changes the country setting for Xircom GlobalACCESS modems |
| Modem Activity | - Stores modem activity information in a log file; great for troubleshooting |
| Flash | - Updates the modem firmware in Xircom modems with a single click of the mouse |
| Un-install | - Un-installs Xircom PC Cards |
| Properties | - Changes the properties of RealView |

RealView is available as a free download from our website at www.xircom.com/downset.html



We have moved

On March 26, 1999, Xircom Asia Pacific moved from our former Shenton Way address to our new location at Great World City. The move was necessary to accommodate for the expanding workforce.

This is what Gerald J. Makos, director of marketing, Xircom Asia Pacific, had to say about the move, "Despite the recent Asia Pacific economic crisis, Xircom still sees continued growth throughout the region. We have increased the headcount of our sales and marketing team so as to continue our efforts overall."

The new headquarters is approximately twice the size of the previous location. Xircom Asia Pacific provides sales, marketing and customer support across more than twelve countries in the region.

NEW ADDRESS AND PHONE NUMBERS

Customers and business partners can now reach Xircom Asia Pacific at:

Xircom Asia Pacific Pte Ltd
1 Kim Seng Promenade #15-01
Great World City East Tower
Singapore 237994
+65 732 5001 Tel
+65 732 5002 Fax
+65 732 2245 Customer Support
asiats@xircom.com Customer Support Email (remains unchanged)

APAC TRADE SHOW *Calendar*

Date	Event	Venue
September 7-10, 1999	Networking China	Booth #2413, China International Exhibition Center Beijing, PRC
November 16-18, 1999	N+I Sydney	Booth #70, Sydney Darling Harbour Convention Centre Sydney, Australia

Xircom at N+I Singapore'99

Words used to describe Xircom: on the cutting edge, aggressive, creative. Words to describe Xircom's recent ads: on the edge, aggressive, creative and even daring. The ferocious doberman pinscher and the brawny Greek statue which have been featured in our "Kill the connector" and "Lost the dongle" ads, made their star appearances at the recent N+I Singapore. Many tradeshow visitors were surprised by the giant images on the 6m-high panels at our booth. The booth design created such a stir that even the local financial daily, BusinessTimes, ran a photo of Xircom's booth. Our next major tradeshow participation will be in September at Networking China. Look out for us there!



XIRCOM ASIA PACIFIC PTE LTD

1 Kim Seng Promenade #15-01
Great World City East Tower
Singapore 237994
+65 732 5001 Tel
+65 732 5002 Fax
+65 732 2245 Customer Support
asiats@xircom.com Customer Support Email

XIRCOM AUSTRALIA

Level 12
80 Mount Street
North Sydney, NSW 2060
+61 (0)2 8923 7000 Tel
+61 (0)2 8923 7099 Fax
+61 (0)2 8923 7090 Customer Support
aunzts@xircom.com Customer Support Email

XIRCOM ASIA LIMITED, HONG KONG

11/F Central Building
1 Pedder Street, Central
Hong Kong
+852 2841 7813 Tel
+852 2841 7822 Fax

XIRCOM KOREA

27/F, Korea World Trade Center Building
159 Samsung-dong
Kangnam-Ku, Seoul, Korea 135-729
+82 (0)2 551 2729 Tel
+82 (0)2 551 2720 Fax

XIRCOM CORPORATE HEADQUARTERS

+1 (805) 376 9300 Tel
+1 (805) 376 9311 Fax

XIRCOM EUROPE NV

+32 (0)3 450 0811 Tel
+32 (0)3 450 0990 Fax

XIRCOM JAPAN KK

+81 (0)3 3407 0033 Tel
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Mobile Connect is published quarterly by Xircom Asia Pacific. There are no subscription fees nor mailing charges. If you have any queries or comments, please call Monica Li at +65 732 5001 or email: connect@xircom.com

FAX: +65 732 5002

first seminar

focusing on

Linux

in the **Real World**

A Half-day Seminar

June 15 1999

2:00 pm - 5:30 pm

Room 603/604

Hong Kong Convention
& Exhibition Centre

In what seems to many as an almost overnight phenomenon, the Linux open-source operating system has emerged from the basements of a die-hard counter-culture into the mainstream of enterprise computing. This seminar will address the fundamental issues that IS professionals and top managers need to confront in determining whether there is a place for Linux in their organizations:

- Why has Linux gained so much momentum in such a short period of time?
- How realistic is it for managers to adopt Linux as a platform that can be supported and sustained in their organizations?
- What are the obstacles that managers need to overcome in order to integrate Linux into their established computing environments?
- Under what conditions and for what applications is Linux a viable alternative?

Time	Topic	Speaker
2:00-2:15 pm	Registration	
2:15-2:20 pm	Welcoming speech	Mr. Don Tennant Editor Computerworld Hong Kong
2:20-3:00 pm	Grow with e-business: Start simple with Linux	Mr. Ernest Lee Software Business Manager IBM China/HK Ltd
3:00-3:40 pm	Penguin power for the people: How Linux leads to greatness	Mr. Danyll Wills Internet Technology Manager Oracle Greater China
3:40-4:00 pm	Coffee break	
4:00-4:40 pm	Managing Linux in a networked environment	Mr. Scott Yeh Marketing Development Manager Novell Greater China
4:40-5:30 pm	Panel discussion with local Linux users	Moderated by Mr. Don Tennant

Organizer :

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HONG KONG

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Linux User Group

Seating is limited..... Register Now !

Please fill in this form and fax it to 2788-5878 or e-mail us at mandyso@hkpc.org. For enquiries, please call Mandy So at 2788-5669.

- ☐ Yes, I would like to attend the 'Linux in the Real World' seminar.
- ☐ No, I won't be able to attend this seminar. Please send me the related information.

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n.b. For multiple reservations, please make copies.

Microsoft has thrown in the towel on its PDC show

What with my trip on the Queen Elizabeth II two weeks ago, and another to Las Vegas for NetWorld+Interop last week, I'm about ready to stay off the road for a while. I had planned to go to Microsoft's TechEd show in Dallas next week, but I'm trying to get out of it.

But any Microsoft developers who do attend had better live it up because the company's bigger development show that usually happens in the fall now will not take place. That's right, the original PDC, the Professional Developer's Conference, which was the launch pad for Microsoft inventions such as COM+, won't happen this fall, Microsoft's PR machine confirmed.

There are two theories: either Microsoft is working so hard on getting Windows 2000 out the door this fall that it can't stop to hold a conference, or Microsoft knows that it won't get Windows 2000 out the door this fall, and the marketing folks don't want to have to tell that in person to crowds of angry developers.

Of course, Microsoft may just be having trouble organizing such an event. The company's reorganization, announced with fanfare by Bill Gates and Steve Ballmer last month, seems to be lacking traction. Internal politics — or perhaps a lack of enthusiasm for the move toward wider autonomy

NOTES FROM THE FIELD — Robert X. Cringely

among business units — has delayed the implementation until June, I'm told.

If you want to complain about the cancellation of the PDC, however, don't send your complaints using Microsoft's Hotmail service. While I've personally noticed significant lags in mail delivery, another reader just noted that mail sent to him via Hotmail on April 21 was finally delivered on May 11.

Microsoft seems to have problems with dates in other applications, too.

Another user wrote in to report that, after installing a new copy of Microsoft Works 4.5, its Calendar program insists that the U.S. Memorial Day holiday is May 24, rather than the actual day it will be observed — May 31. Makes you think twice about how ready the company is for Y2K.

Meanwhile, users of Microsoft NetMeeting might find their meeting becoming a little more virtual than they intended if they are using different clients. Apparently, Internet Explorer 5 uses NetMeeting 2.11, and IE 4.0 uses NetMeeting 2.10. A reader wrote in to note that you can't use NetMeeting for a conference un-

less all participants are on the same version.

On the standards front, Adam Bosworth, the general manager at Microsoft, recently hinted at the problems behind the confirmed-but-never-announced Simple Object Access Protocol (SOAP), which was a way to send different object technologies over HTTP. Bosworth said the protocol suffered because "two or three companies who needed to agree didn't." The protocol was developed with partners, but Bosworth wouldn't say which ones were dragging their feet. He did say that a standard will eventually exist in that area.

— RESEARCH —

HORIZONS

Pushing biometric identification. Fingerprint technology specialist Groupe Sagem and STMicroelectronics last week announced they will work together on fingerprint-identification technology for high-volume consumer applications such as mobile phones, electronic commerce, and smart cards.

The cooperation between the two French companies will combine STMicroelectronics' TouchChip technology for capturing fingerprints with Sagem's experience in processing fingerprint data. The companies expect to provide a low-cost identification technology in order to control access to equipment such as PCs, mobile phones, and cars.

STMicroelectronics' TouchChip technology captures high-resolution fingerprint images in less than one-tenth of a second when a finger is applied directly to the chip surface, according to STMicroelectronics. Algorithms in Sagem's software process the digital images to confirm or invalidate pre-identified fingerprints, and fingerprint data can be stored and searched in the Sagem software.

The cooperation's first product — a "module" that will include hardware and software — should be available in September, according to STMicroelectronics spokesman Richard Stockdill. Pricing information wasn't available but Stockdill said that computer-based, fingerprint-authentication systems exist now for about US\$100 and the companies plan to offer products with similar prices at least, but with improved security features.

Sagem is already well-known for its fingerprint technology in the world of crime prevention. Earlier this year, for example, Sagem signed a contract to install one of its Automated Fingerprint Identification Systems at the headquarters of the International Criminal Police Organization (Interpol) in Lyons, France. Sagem's fingerprint system will automate the management of Interpol's fingerprint collection, letting Interpol's 177 member countries request fingerprint searches via the organization's global network, Sagem said.

Iris identification technology may provide competition for the eventual products that STMicroelectronics and Sagem develop. Backers of the eye-identification procedure claim it to be far more accurate than identifying people by their fingerprints. According to one vendor, IriScan, fingerprints can change with age although patterns in the human iris do not. As with fingerprints, no two irises are alike, according to the company.

NCR developed an automated teller machine (ATM) that incorporates an iris-identification system from Princeton, New Jersey-based Sensor, and last year tested the ATM at Nationwide Building Society in Swindon, England. When the product test was finished, NCR said it intended to integrate iris identification into more of its ATMs for controlling bank-account access.

British Telecommunications has also said that it may deploy iris scanning technology in wireless devices and mobile equipment such as mobile phones.

Only two types of biometric identification — fingerprints and DNA identification — are widely accepted, however, according to STMicroelectronics' Stockdill, who added that this will give his company's products an edge over other identification forms such as iris recognition.

"It varies in different countries, but generally speaking fingerprints and DNA are the only identification forms that are legal," Stockdill said, "and fingerprinting is the most widespread."

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